

## Workshop (Level 8)

### General Aspects of Safety in the Laboratory

It is not only your responsibility to “be safe” and not to injure yourself or others, but it is your responsibility to ensure those working around you “are safe too”.

Make sure you know and understand the procedures for the use of tools and equipment before using them and if you are unsure of anything, ask a designated safety officer (Andrew Glidle), first.

### Detailed Safety Procedures

- Lab coats or other protective clothing, as required, must be worn at all times in the lab. Where necessary, safety spectacles must also be worn.
- Personal belongings such as bags and coats should be stored in owner’s office or under a bench, not left on the open floor.
- Always tie hair and loose clothing/jewellery back, tape or remove rings if there is a risk of catching them on tools and equipment, wear appropriate eye protection and protective clothing, and use provided safety measures such as chuck guards or covers.
- No food or drink may be consumed in the workshop.
- If any equipment breaks or is not working tell the level 8 laboratory responsible (Andrew Glidle) immediately.
- In the event of an accident or mishap tell someone, preferably one of the lab staff, supervisor or colleague.
- If you find yourself following a possibly unfamiliar procedure or performing an experiment and are unsure of what to do next or if something is going wrong, seek assistance from somebody rather than end up having an accident.
- All walkways should be kept free of blockages as far as possible and work surface should be kept free from clutter.
- When doing any workshop jobs that require significant force e.g. filing, sawing, routing etc, make sure the work-piece is securely clamped, that you are wearing appropriate safety spectacles and that you know how to do the job without injuring yourself (e.g. cuts, lacerations, bruises etc) through the tools or work-piece slipping, or suddenly breaking. In general when you are doing workshop jobs, think carefully about how things could go wrong and then work in such a manner as to avoid them. If you are uncertain in any way, ask the person in charge of the workshop for advice (Andrew Glidle).
- When working near to the workshop door, make sure that the door is propped open so as to avoid someone else opening the door and knocking you aside, causing an accident.
- When entering the workshop, look carefully through the door window, to make sure there is no one working immediately next to the door. Ensure that you do not startle them by entering the room quickly.

Machine Tools: Such as drills, routing/milling machines etc.

- Wear appropriate eye protection and protective clothing to prevent injury from wire cuttings, slipping tools etc.
- You must only work with machine tools for which you have had training or have demonstrated that you have the experience and competency to use safely.
- Only use machine tools for their designed purpose. Do not make modifications or try to load work pieces that are too large or heavy or that cannot be safely clamped into position.
- Familiarise yourself with the location of power off switches.
- Be aware of the torque generated by drilling machine. Take care to have a secure grip and stance. Clamp the work piece where necessary. Drilling or grinding of glass is particularly hazardous and safety glasses must be worn. In addition, cloth (gardening type) gloves should be worn to avoid cuts from broken glass.
- Never operate machine tools when no-one else is within earshot or sight; or defeat safety interlocks. This is particularly important if working in the evening or at weekends.
- After the using, machine tools accessories must be kept back at their dedicated place/ slots.

Electrical Tools: Such as soldering Irons, hand drills, hot air guns etc.

- Mains powered hand tools such as hand drills, hot air guns, orbital sanders, soldering irons etc. must be inspected before use to identify frayed or damaged flexible leads, insecure lead clamping or cracked plugs/casings etc. If any damage is found they must not be used until repaired and safety tested.
- A regular PAT inspection and testing schedule should be in place for all mains powered hand tools.
- Soldering Irons must not be left on when not in use.
- When soldering ensure the ventilation in the room is switched on. Tie hair and loose items back to prevent burning. Wash hands after handling solder alloys and fluxes.

Waste Procedures:

- All workshop users are responsible for good housekeeping. Workshop users should replace tools and equipment immediately after use and remove swarf, filings and other debris from machine-beds, workbenches and the floor as soon as possible.
- Tools should not be left on machine-beds while the machine is running. The floor should be kept clear of obstructions, and all spillages must be cleaned up immediately. Waste bins are provided in Level 8 and should be used appropriately.
- To minimise dust etc. on benches bench tops will be cleaned monthly and it is your responsibility to clear the bench both before and after carrying out work in the workshop. Keeping a minimum amount of waste in the lab reduces dust.

Separate Risk Assessments should be produced to do anything that is extraordinary and/or new/unfamiliar materials, equipment, tools or procedures are being used.