

# Health and Safety Information for AFM Group Laboratory Rankine Building Rooms 111

## Code of Practice

*Level 1 Rankine Building*

*Electronic & Nanoscale Engineering, School of Engineering, University of Glasgow*

*Prepared by John Weaver 29 June 2020*

**All Laboratory Users must read this document in full**

### A. Categories of Activity

#### 1. Vacuum Pumps

##### **Potential Risks and Control Measures**

- a) Electrical shock:  
Care should be taken when plugging in the pump station to a wall socket. All pumps will be PAT tested. If power supply wiring is damaged, request work from the electrical workshop.
- b) Moving pump stations:  
Care should be taken when moving pump stations. Never place the pump precariously (e.g. placement on a flimsy surface). Prepare placement area before attempting to move pump.
- c) Minimizing COVID-19 Exposure Risk:  
Before moving pump, wipe the handle surfaces with IPA.

#### 2. Electrical Apparatuses

##### **Potential Risks and Control Measures**

- a) Electric Shock and Fire:  
All electrical equipment is PAT tested. Instrument housing will not be removed when the equipment is connected to the power supply. A grounding strap and grounding mat should be used when handling or modifying electrostatically sensitive electronics.

#### 3. Chemical Safety

##### **Potential Risks and Control Measures**

- a) Solvents:  
Both Acetone and Isopropanol (IPA) are flammable solvents and thus should be kept away from heat sources. No more than one small squeeze bottle of solvent should be housed in any lab at the same time. These chemicals should always be decanted underneath a fume hood. Gloves are required when handling these chemicals.

- b) Silver paint:  
The silver paint is used to make electrical contacts. The solvent for the paste should not be ingested or inhaled. Gloves should be worn when handling the silver paint and the container should be firmly stoppered when not in use.

#### 4. Other equipment

##### **Batteries**

Expired batteries will be replaced and disposed of in the electrical workshop. Do not throw away in trash.

##### **Hand Tools**

###### **Potential Risks and Control Measures**

- a) Injury:  
Care will be taken when setting up and handling. Wear safety glasses when operating to prevent debris from entering the eye. Securely grip the tool in hand and ensure that object being drilled/polished is secured.

##### **Heat Gun and Soldering Iron**

###### **Potential Risks and Control Measures**

- a) Burns:  
Never touch soldering iron tip or nozzle of heat gun when they are turned on. Assess whether to wear safety glasses when soldering. Do not point air stream of the heat gun at face or body. Let objects cool before touching.
- b) Fire: Do not leave soldering iron and heat gun unattended when they are turned on. Turn off these devices when use is finished. Do not allow these tools to heat flammable objects or electrically powered devices.

#### **B. Best Practice in the Laboratory**

- Use safety equipment provided appropriately
- Use equipment in accordance with manufacturer instructions.
- Report faulty equipment immediately to Professor John Weaver or Dr. Phil Dobson and lab members.
- The main door to the laboratories should be kept shut if not in use, for fire safety, security, and noise reduction.
- Be aware of placement of fire extinguishers and fire alarms in the lab.
- Keep the lab tidy. Always return tools to their storage places, and do not leave workspaces messy.
- Lab members are responsible for ensuring that visitors follow appropriate safety protocols
- For out of hours working (evening after 5pm/weekend), sign the book at reception on the fourth floor.

#### **C. Protocols to address COVID-19 exposure risks**

- Follow general guidelines provided by the University, <https://www.gla.ac.uk/myglasgow/news/coronavirus/>

- Wear masks when working in close physical proximity in the laboratory or when in communal areas outside the laboratory. Not required when working at a safe physical distance.
- Wash hands before entering the lab and handling pieces of equipment / instrumentation / computers using soap and water or alcohol hand gel.
- Wipe down any surface that you would touch using disinfecting cloths before and after work. This includes benches, door and cupboard handles. Instrument controls to be wiped down with IPA wipes, not detergent or other cleaners.
- Due to the reduced provision of first aid support and building occupancy in general take extra care when performing work and plan who to contact in case of accidents. Make sure that at least one person knows where you are and contact them regularly.
- No more than one person should occupy the lab at one given time.