

## **LABORATORY RULES AND SAFETY GUIDES**

### **General Regulations**

- Laboratory work can be only carried out by approval of personnel and approve containment workplace design by the safety officer. *Appendix (list of lab and person in charge).*
- Risk assessment (HIRARC), SDS and SOP must be read and understood prior to commencement of work.
- Smoking, drinking and eating in laboratory are strictly prohibited.
- All students and staff are required to wear personal protective equipment specified by the SDS during laboratory activities. For those who had long hair, neatly tied your hair before entering the laboratory. Students have duties concerning the provision.
- Make sure you wear appropriate safety equipment when the experiment is carried out. Most of the experiments involve chemicals, high temperature and pressure. Therefore use the safety equipment provided.
- Students are prohibited from wearing jewellery.
- Follow all safety instructions and warning signs in the laboratory room.
- There must be at least two students in the course of experiments in the laboratory at any one time.
- Familiarize yourself with the emergency equipment such as fire extinguishers, sprinkler and other emergency plans.
- Disposal glove should be restricted in the workplace only. Keep your hands washed before leaving the laboratory and notify laboratory staff immediately if contamination is suspected.
- Clean and return all laboratory equipment that was used before leaving the laboratory.
- Any accident must be immediately reported orally to laboratory staff on duty. If the minor fire broke up, use fire extinguishers. If the fire is beyond control, immediately evacuate the lab and gather at designated assembly centre. Inform the UTM Security Guard.
- Sharp or scalpel blade should not be used unless it is necessary for the work
- Outdoor clothing and personal belongings such as handbag must be put in proper cabinet.
- Housekeeping must be carried out consistently. Avoid storing items such as cardboard boxes underneath bench as these may become contaminated in the event of spillage.

### **Safety Clothing**

- Each individual must comply with the safety clothing code or prescribed protective equipment in accordance with the MSDS while carrying out experiments.
- Lab coat and shoes must be worn at all times in the laboratory and remove before washing hands and leaving.

## **Laboratory Equipment**

- Do not use any laboratory equipment without permission of the laboratory staff on duty.
- Use suitable apparatus such as tip to aliquot solution and mouth pipetting are strictly prohibited.
- Do not remove any of the laboratory equipment without permission.
- Before using the laboratory equipment, make sure the power source and plug is in accordance with the equipment.
- Report immediately to the laboratory staff on duty if any laboratory equipment is damaged before or during the use.
- Users need to monitor the experiment / laboratory equipment in safe operation. Inform the laboratory staff on duty should you have to leave the experiment / operations.

## **Waste**

- All waste materials shall be decontaminated by autoclave.
- Items awaiting disinfection must be stored in a safe procedure.
- Pipettes must be immersed in disinfectant after used.
- Plasticware, glassware and petri dish containing media must be decontaminated.
- The user is responsible for cleaning desks and equipments after using them and to make sure that the laboratory environment does not endanger other users.
- Throw all debris that is not harmful to the trash
- Chemicals residuals must be separated in the neatly labelled bottle before being discharged into a designated disposal site in the lab.
- Do not throw garbage and waste into the sink or urinal.
- Disposed biological materials waste by following the designated disposal procedures.
- Dispose used glove properly in container provided.
- Broken glass should immediately be cleaned up and discarded into the container labelled for that purpose.

## **Electricity, Gas and Others**

- All gas, fuel and gas flow valve must be closed before leaving the lab room and when not in use. Closing fume chamber should be reduced to the lowest level.
- Make sure all electricity sources, water, gas, air conditioning and appliances are off when not in use and before leaving the lab room.

## **LMO/GMO Handling**

- Student and staff must receive proper training in handling microorganisms including recombinant microorganisms (LMO/GMO) and an appropriate standard of supervision of the work must be maintained followed by Malaysian Biosafety Act 2007.
- Contamination of skin and mucous membranes and self-inoculation must be avoided.
- Waste material contaminated with BAs/GMMs must be decontaminated before leaving the area either by suitable disinfection or by autoclaving.

- BAs/GMMs must be safely stored in designated incubators, refrigerators and freezers. Details of all organisms must be maintained in the department (in logbook and file)
- Equipment requiring service or repair which has been in contact with BAs/GMMs must have a signed certificate stating that it does not present any hazards before an engineer is asked to work on it.
- All accidents and incidents must be immediately reported to the Assistant Science Officer or Safety Officer or Laboratory Manager.

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