12. LABORATORIES

STANDARD OPERATING PROCEDURE

PURPOSE

The main objective is to promote safe and secure working environment for people working in labs. The main objective is to formulate a set of written instructions in detail, how to perform a laboratory process or experiment safely and effectively.

LABORATORY SAFETY MANUAL

- The safety manual includes all the set of safe working procedures which should be carried out in the laboratory. The contents in the manual should include
- Standard Operating Procedures for the experiments to be carried out in the laboratory.
- Standard risk assessments should be done for the tasks involving hazardous chemicals and high risk procedures.
- All the chemicals and equipment should be registered in the log book maintained by the laboratory-in-charge.
- Working rules that are appropriate to the particular laboratory should be written and displayed in the labs.
- Before the commencement of work, each person should sign the manual that they have understood the rules and regulations which must also be countersigned by the lab in-charge.

GENERAL SAFETY RULES

- In case of injuries, first aid kit will be located next left to the main exit door.
- In case of fire mishaps fire extinguishers are located next left to the main exit door.
- Safety showers and eye wash stations should be located next right to the main exit door.
- There should be a refugee area where all can gather in case of fire accidents.
- Appropriate protective clothing (aprons, gloves) should be worn wherever and whenever required.
- Approved safety spectacles, goggles or safety shields must be worn wherever required.
- Fasten loose clothing and tie back long hair.
- Closed footwear should be worn at all times so that they offer protection from corrosive or hot liquids and might save from potential sources of injury.
- Wash hands and remove laboratory coats after the completion of experiment and before leaving the laboratory.
- Do not run around or engage in reckless behavior while working in labs.

- It is prohibited to eat and drink in the laboratories.

HOUSEKEEPING

- The floors should always be kept clean and dry.
- Keep the benches and apparatus free from chemicals and clean the apparatus thoroughly.
- Turn off all the equipment in use and extinguish flames when leaving the laboratory.
- Waste should be disposed properly.

FIRE PREVENTION

- No smoking in laboratories or in any University buildings.
- Open flames should not be left unattended and no open flames should be used near flammable solvents.
- Keep fire escape routes clear at all times.
- Before starting work, all staff and students are to become familiar with the fire procedures and location and use of fire-fighting equipment within the laboratory.

EMERGENCY/FIRST AID

- It is the responsibility of all supervisors, lecturers and demonstrators to ensure that persons working in a laboratory know the location of: the nearest fire extinguishers/fire blankets fire / emergency escape routes first aid box emergency shower/eye wash facilities isolation devices for gas, water and power (where fitted) emergency spill containment equipment and procedures emergency personal protective equipment any special substances that require antidotes.
- Wash skin immediately with plenty of water if contaminated with acids and alkalis (if required seek medical attention).
- Eyes splashed with any chemical must be washed with water for 15 minutes and medical advice obtained immediately.
- All breakages and spills must be reported to the supervisor and dealt with immediately. Spills should be cleaned up and bins provided for broken glass and spill cleanup materials
- Ensure all incidents and injuries are reported. Injuries should be recorded in the First Aid log