

Standard Operating Procedure for Institutional Laboratory Safety Of Maharaja Sriram Chandra Bhanjdeo University

1. Preamble

This laboratory safety and standard operating procedure will serve as the guidelines for all personnel working in the Research/practical laboratories at Maharaja Sriram Chandra Bhanjdeo University. The guidelines will help in avoiding health risks and accidents at work places, as well as to act appropriately in case of emergencies and to minimize the environmental burden.

2. General Conduct

- It is the responsibility of every staff and student to ensure that the laboratory is a safe environment for everyone.
- The laboratory is a place for scientific research, and as such, staff and students should not engage in idle gossip while working. Running around and boisterous behavior will not be tolerated.

3. Personal Protection and Hygiene

- I. Laboratory coats must be worn at all times in the laboratory. (However, please note that lab coats must not be worn in common areas such as the students write up area, toilets and in the public)
- II. Coats should be washed in laundry regularly or whenever they are contaminated.
- III. Gloves must be worn when handling chemicals, toxic compounds or biohazardous substances. (However, all gloves should be removed before opening doors, taps or when using the telephone)
- IV. Eye protection will now be mandatory for all personnel working in or visiting the research laboratory where hazardous materials, such as corrosive, injurious, infectious materials are handled.
- V. Any abrasions cuts or open wounds in the skin should be covered with an adhesive plaster before beginning work.
- VI. Mouth pipetting is strictly prohibited.

4. Food and Beverage Consumption

- I. Eating, drinking and smoking are strictly forbidden in the laboratory.
- II. Laboratory refrigerators must not be used for the storage of food and beverages.
- III. Glassware or utensils, kettles and microwave oven used for laboratory operations must not be used for preparation of food and beverages.

5. General Housekeeping

- I. Work areas, including walkways and passages should be kept clean and free of obstruction. The floor should also be kept dry at all times.

- II. All samples and solutions must be labeled clearly with the name of the substance, the initials of the user and supervisor, and the date. All unlabeled containers will be discarded without notice.
- III. All laboratory reagents and chemicals must be returned to the appropriate shelves or special storage areas (e.g., refrigerators) immediately after use.
- IV. Spilled chemicals must be cleaned up immediately and contaminated materials properly disposed. Laboratory benches and instruments must be thoroughly cleaned after use.

6. Chemicals

- I. All laboratory workers must be familiar with the potential hazards of chemicals, and follow recommended procedures for their use, handling, storage and disposal. If in doubt, workers should consult the Material Safety Data Sheets (MSDS) concerning the relevant chemicals before commencing their experiments.
- II. All chemicals must be clearly labeled. In addition, warning signs should be posted if special precautions are required (e.g., if the chemical is inflammable, highly toxic or carcinogenic).
- III. Experiments involving organic solvents or volatile chemicals should be performed in the fume cupboard.
- IV. Waste solvents must not be disposed into the sink. Instead, they should be poured into waste solvent bottles that have been specially set apart for each solvent. Where possible, different solvents should not be mixed.
- V. Write legibly and state clearly the chemical composition of the wastes. Affix waste containers with appropriate caution labels indicating the hazard classification and class of waste.

7. Laboratory Equipment

- I. Before operating any laboratory instrument, please ensure that you are familiar with the operation of the instrument. If in doubt, either read the instruction manual or consult the relevant staff (Name and contact number of the person in-charge of the equipment will be pasted on the machine).
- II. If a record book is placed next to a particular laboratory instrument, all users of the instrument must ensure that the relevant information is recorded in the book.
- III. All faulty or damaged laboratory equipment must be reported to the person-in-charge.
- IV. Laboratory equipment must not be re-positioned unless prior approval has been obtained from the person-in-charge.
- V. All users of laboratory instruments must remember to turn off their electrical switches after use (unless stated otherwise).
- VI. All laboratory items (including spatulas, pipettes etc.) must be returned to their original storage place after use.

8. Various signs for Laboratory

The undermentioned signs must be displayed in the wall or appropriate sites regarding the nature of the chemicals and potential risk if any



9. Maintaining Log books

All user must maintain a log-book entry of the machine/equipment/chemical they are using for research/practical purposes both for individual faculty laboratories and common facility.

10. Institutional laboratory safety committee (ILSC)

The MSCB University Institutional Laboratory safety committee (ILSC) is a committee which is empowered to ensure that the guidelines are properly followed by all the stakeholders involved in working in the Laboratories. The role of the committee is as follows

- I. Chairman: Director R&D of University
- II. Members: One Faculty member from each science Department including Anthropology
- III. Safety officer: One faculty member may be nominated as Safety Officer

10. Meeting of the committee

The committee will meet at least two times in a year. The detail proceedings may be recorded.

11. Visiting Individual Labs

The safety officer will visit Individual labs and also prepare a list of violations if any. The Safety officer will also organize training program for Faculty members/Researchers/students regarding good laboratory practices

12. References

Laboratory Safety Manual, National Centre for Biological Sciences (NCBS)