

## **SAFETY NOTES AND PROCEDURES - FEBRUARY 2020**

After reading this document sign and return the acknowledgements form to the lab coordinator.

### **YOU ARE RESPONSIBLE NOT ONLY FOR YOUR OWN SAFETY BUT ALSO FOR THE SAFETY OF OTHERS.**

- Laboratory hours: 1:00 pm to 5:00 pm for ChE302.01 and 9:00 am to 1:00 pm for ChE302.02.
- Leave all coats and bags on the bench at the entrance of the laboratories. Only lab notebooks and essential items should be taken into laboratories.
- Although you may be admitted into laboratory, you are NOT allowed to start working, unless graduate assistant is present.
- You MUST wear a lab coat and safety goggles/spectacles.
- Cuts and scratches on hands should be covered with sticking plasters to reduce the risk of infection. Be aware of the safety equipment available, its location and method of use, i.e. fire extinguishers, fire blankets, eyewash stations, first aid boxes.
- Familiarize yourself with the layout of the building and its fire escapes. Read the "Fire Notice" posted on the exit door of the laboratory.
- DO NOT EAT, DRINK, or SMOKE in the laboratory.
- Wash your hands during and at the end of each practical session.

### **HAZARDS**

- DO NOT MOUTH PIPETTE, instead use pipette filters.
- Work with all flammable, toxic or corrosive liquids should be carried out in a fume cupboard.
- DO NOT make any hand to mouth contact.
- Beware dust formation when weighing out dry chemical or biological materials.
- Inhalation or skin absorption may be harmful. Be aware of any short or long term effects due to inhalation, injection, or absorption of chemical compounds.

### **ACCIDENTS**

- Report all accidents/spillages, no matter how trivial, to the lab coordinator. If your skin becomes contaminated, wash it thoroughly with antibacterial soap.
- First aid is available in the First Aid cabinets which hang at the entrance of each laboratory. (South Campus Infirmary Ext: 6240). Use eye-wash stations and emergency showers for any kind of chemical spillage.
- DO NOT use chipped or cracked glassware.

## **CHEMICALS**

- Do not leave bottles of flammable and corrosive liquids on work benches. Store in labelled bins/cupboards when not in use.
- Ensure all bottles/containers are labelled correctly.
- Carry out transfers of flammable solvents and strong acids/alkalis in a fume cupboard. A fume cupboard is to be used for EITHER solvents OR acid alkalis. BUT NOT BOTH AT THE SAME TIME.
- When diluting acids, cautiously add acid to the water. NEVER add water to concentrated acid.
- DO NOT dispose of paper towels soaked in flammable solvents. Place such paper into fume cupboard until the solvent has evaporated. The dispose of dry paper towels into waste bins.
- DO NOT use hand-washing sinks for the disposal of chemicals.
- Mercury if-spillage occurs, collect as much as possible with the hand operated vacuum pump. Treat the remainder with zinc dust, if available (to form an amalgam). Please note zinc dust is flammable. Report incident to the lab coordinator as soon as possible. This is an accumulative POISION, vaporizing at quite low temperatures. Therefore avoid breathing the vapor. Mercury is absorbed through the skin; therefore wear gloves etc. when handling this material. Mercury manometers must be fitted with a thistle funnel or similar vessel on the arm that is open to atmosphere; in case of over pressure. Place all such equipment on or over a tray in case of spillage.
- DO NOT use 'Chloros' (sodium hypochlorite) on stainless vessel. This is one of the few compounds that will corrode stainless steel.
- Do not store or dispense ether or chloroform into clear glass containers. Explosive by-products are produced by exposure to light.

## **GAS CYLINDERS**

- Always use cylinders in a vertical position and always use safety straps to hold the cylinders. Attach the straps to walls or permanent fixtures e.g. benches.
- Pressure regulators are easily damaged. DO NOT KNOCK OR JAR THEM (Note: flammable gas regulators have a left hand thread).
- When changing cylinders DO NOT allow the pressure regulator to be supported by the pipe-work.
- Turn the cylinder neck valve OFF, after you have finished your work.
- Regularly check all pipe-work for leaks with soap solution.

## **DISPOSAL**

- DO NOT dispose contaminated materials, acids, bases, and solvents down to the laboratory sinks. See Chemist Miss Balkan in KB 408.
- Place all broken glassware into labelled 'Broken glass' bins.

## **FUME CUPBOARDS**

- Always use a fume cupboard when handling flammable solvents or corrosive substances (acids/alkalis). Never handle both types of substance in the same fume cupboard at the same time.
- Make sure any materials that are left in the fume cupboard are clearly labelled. NOTE: Fume cupboards are not to be used as storage areas.
- Clean up any spillages.

## **GLASSWARE**

- In order to clean glassware, washing machines are available in lab KB 440 and KB 407, See Miss Balkan.
- Clean dry glassware is available from the storage shelves in lab KB 408 and in ChE stockroom, see Miss. Balkan.
- Do not use chipped or cracked glassware. For damaged but repairable glassware, see Miss. Balkan in KB 408.
- DO NOT dispose of broken glassware into ordinary bins. Put ALL broken glassware into cupboard boxes labelled 'Aerosol&Glass Waste'

## **FINALLY**

- Clearly label all items etc. that you wish to be kept.
- Clear away equipment and materials from your bench into the cupboard before leaving laboratory.
- Your practical assessment may account for up to 10% of your final marks. Your conduct and observance of safety recommendations will be included in this assessment.
- Wash your hands regularly. Use only sinks designated for hand-washing. Use antibacterial soap when necessary; dry your hands with disposable paper towels.
- Do not use towels for hand drying. Use only paper towels.
- Ensure your laboratory coats are laundered regularly. (i.e. every week).

**I have read and understood the safety recommendations outlined above.**

**Name & Surname** : .....

**Sign** : .....

**Date** : .....