

LABORATORY REGULATIONS

YOU MAY NEVER UNDER ANY CIRCUMSTANCES WORK IN THE LABORATORY OUTSIDE OF YOUR ASSIGNED LABORATORY PERIOD WITHOUT PERMISSION FROM THE INSTRUCTOR.

A. Safety goggles must be worn at all times.

It is not advisable to wear contact lenses in the laboratory. Reading glasses are not appropriate. If chemicals come in contact with your eyes, flush copiously with water for at least five minutes. (Eyewash stations will be demonstrated during the safety lecture.)

B. Lab coats should be worn when working in the laboratory.

C. Accidents: First aid is essential.

Flush all chemical splashes with copious amounts of water. Use eyewash stations for chemicals in your eyes and apply handfuls of water to clothing. Also wash out liberally with water. Consult with the instructor concerning further treatment.

D. Fire Hazards

1. No burners are to be used for heating in this laboratory. All heating will be done with steam baths, hot baths, or electric heating mantles. The solvents used in the laboratory, such as alcohols, ethers, petroleum ether, etc., are highly flammable; thus, we take much care in keeping solvents away from flames.
2. NO SMOKING IN THE LABORATORY OR ANYWHERE IN THIS BUILDING.
3. In case of fire, REMAIN CALM! Most fires are contained in beakers or flasks and can be easily smothered by being covered with a watch glass or fireproof plate. More extensive flames should be smothered using a carbon dioxide extinguisher. Since water does not dissolve many organic solvents, it will not extinguish most fires, but will cause them to spread. So **do not** use water on a fire.

E. General Safety

1. Keep long hair tied back, out of the way of chemicals and equipment.
2. Beware of hot glassware. Do not touch until it has had time to cool.
3. To insert glass tubes or thermometers through rubber stoppers or adapters, first lubricate with glycerin or stopcock grease; hold the glass with a towel, cloth or other hand protection. Hold the glass tube or thermometer near the end being inserted.
4. **No food or drink in the laboratory at any time!**

F. Laboratory Neatness

NEATNESS is essential for safety and for efficient work in the laboratory.

1. Keep the lab uncluttered by leaving unnecessary items in the locker. Push back the chairs and stools to their position after using them.
2. If you spill anything on a balance pan or in the balance area, clean it up immediately and leave a clean balance for your neighbor. Balance doors should be closed after using the balance. Please cooperate.
3. If you spill acids, bases or other corrosive chemicals, inform the instructor and wash contaminated surfaces with copious amounts of water, and then neutralize as directed by the instructor.

G. Use of Reagents

Ref: Read Most, C.F., pp. 12-27.

1. USE REAGENT BOTTLES ONLY IN THE AREA WHERE THEY ARE PROVIDED. Solid reagents for this course will be set out on shelves at the front of the room, and occasionally in the hood. Corrosive liquid reagents will be in the hood or on trays.
2. Take no more of the reagent than you need.
3. If by accident you take an excess amount of reagent, share it with a fellow student or dispose of the excess in the appropriate chemical waste container. NEVER POUR ANYTHING BACK INTO A REAGENT BOTTLE.
4. No chemicals may be taken out of the laboratory.

5. Always dispose of chemicals properly in the designated containers or according to instructions.
 - a. Pour water-insoluble liquids (e.g. dichloromethane, ether, petroleum ether, etc.) into the designated organic waste containers.
 - b. Dispose of solids in the Solid Waste container, and throw paper refuse in the lab wastebaskets.

H. Use, Care and Replacement of Laboratory Equipment

1. Water tends to rust equipment and also to cause drawers to swell so that they cannot be opened without great difficulty. Consequently, if you spill water in a drawer, immediately take time to dry it carefully. Also, do not store sponges in your drawer.
2. Separatory funnels, distillation columns and thermometers are very expensive. They should always be put away clean and with stoppers out.
3. Normal breakage is covered by the lab fee. However, certain pieces of apparatus are expensive, and excess breakage will be billed to you.