West Virginia University.
POTOMAC STATE COLLEGE

POTOMAC STATE COLLEGE PROCEDURE

APPROVED: _____

Jennifer E. Orlikoff
Campus President
March 21, 2017

Safety and Laboratory Regulations for All Chemistry Laboratories

I. General Regulations

1. Departmentally approved eye protection is mandatory in all laboratories at all times during experimental work. Safety glasses must be worn by everyone not wearing corrective lens. Those wearing corrective lens (eyeglasses) must wear an appropriate pair of splash proof goggles over their prescription glasses. Persons wearing contact lens that have eyeglasses are required to wear their glasses along with an appropriate pair of splash proof goggles. Contact lens in the laboratory are considered a serious safety hazard. They are never to be worn during lab class unless special permission is obtained from the Chemical Hygiene Office. Those persons whose eye condition precludes the wearing of glasses and medically requires the use of contact lens, must secure this fact in writing from a qualified eye specialist. They must present the written statement to the Chemical Hygiene Officer by the third week of the semester. These individuals must then purchase a special pair of safety goggles at the bookstore. **Failure to provide and use adequate eye protection at any time during a lab class will result in expulsion from that lab class. This will result in a failing grade for that lab class.**

   All students are required to purchase a departmentally approved plastic or rubberized apron. Aprons are to be worn at all times during a lab class.

   Those students required to work with organic chemicals, must secure two pair of rubber gloves for use during lab class. Your instructor will inform you of the times when you are able to work **without** wearing rubber gloves. Otherwise

keep them on. Latex or other types of surgical gloves are not acceptable and can only be used in an emergency situation. When you finish your experimental work, wash your gloved hands before you remove your gloves.

2. The performance of unauthorized experiments is strictly forbidden. The performance of experiments outside scheduled lab class times is forbidden.

3. All personal injuries occurring in the laboratory, however slight, must be reported to laboratory instructor. Your laboratory instructor will report, in writing, to the Chemical Hygiene Officer in not less than one school week after the accident.

4. Any accident such as the spilling of dangerous or corrosive chemicals, explosions, fires or the like, must be reported immediately. Your laboratory instructor will report, in writing, to the Chemical Hygiene Officer in not less than one school week after the accident.

5. Each student is required to know the location and proper operation of fire extinguishers, safety showers, eyewashes, first aid kit, etc. in the laboratory in which they are working.

6. All water, gas, air, electrical and other service connections are to be turned to the off position immediately after use.

7. Solid matter, not soluble in water (notably paper, matches, towels, broken glass, stoppers, rubber tubing, etc.) is to be kept out of the drains. Such items are to be kept away from positions where they may fall into the sinks or drains.

8. Practical jokes, boisterous conduct, foul language and noise are forbidden.

9. Do not remove chemicals or glassware of any kind from the lab. It is against State and Federal law. Lab equipment is considered drug paraphernalia.

10. No smoking is permitted in Science Hall. The use of smokeless tobacco is prohibited. Chewing of gum during chemical experiments is forbidden.

11. No person is permitted to work alone in the laboratory. For students, an instructor must always be present.

12. Gas taps should be kept closed unless a burner is being used.

13. Make certain matches are extinguished before disposing of them in the large steel waste can at the end of each laboratory bench.

14. Never heat flammable liquids in an open container with a gas burner. If in doubt, consult your laboratory instructor.

15. Students are not permitted in any preparation room of the department.

16. Students are not allowed to requisition glassware, chemicals or equipment from the preparation room at times other than Check-In or Check-Out.

17. After the second week of laboratory classes, you must have your own pair of safety glasses and apron. None will be loaned to you from the Preparation Room. Failure to have safety glasses and/or apron will result in your dismissal from the laboratory class. **No exceptions will be made!**

II. Personal Protection Regulations:

1. No chemical should be tasted or touched, unless you are directed to do so by your laboratory instructor. When you are instructed to smell a chemical; do so by gently fanning the vapors toward your nose with a cupped hand.

2. If you are contaminated with chemicals in any way or if you contaminate reagents, you must report this to your instructor. Your instructor will make a written report to the Chemical Hygiene Officer in not less than one school week after the accident.

3. When heating or carrying out a reaction in a test tube, never point the mouth of the tube toward yourself or a neighbor. Use a hot water bath whenever possible.

4. When cutting glass tubing always protect your hands with a towel. When inserting rods, tubing or thermometers into rubber stoppers, the glass should be lubricated with glycerol or soapy water. Tubing should be always fire polished and smooth. Make sure the glass is cool before you touch it. Cold glass and hot glass look the same.

5. Glass tubing should extend well through the rubber stopper so that no closure of the tube will occur if the rubber swells.

6. Heavy pieces of glass apparatus should be supported with clamps suitably protected with rubber or fiberglass pads. Use a bottom support such as a ring or tripod. Be sure to use wire gauze below the glassware to spread out the flame.

7. When diluting acids, **always** pour **acid into water** with constant stirring, never vice versa.

8. Food and soft drinks are forbidden in the laboratory. Do not use chemical apparatus for drinking cups. If you leave the laboratory to go to the lavatory, for a drink, etc. just go and come right back. You need not ask for permission. Never leave apparatus boiling or allow a reaction to go unattended.

9. Shoes that cover the toes are required to be worn at all times in the laboratory. Sandals, and any type of open weave athletic shoes (all shoes made of nylon, canvas mesh or the like) are forbidden. No high heeled, open toe or rear shoes are permitted. Absorbent socks are required to be worn along with the proper shoes. The protection of the closed shoe along with the socks will keep chemicals away from the skin.

10. Wear old clothes, long pants or skirts that extend to the ankle. Roll sleeves above the elbows or wear short sleeves. Sweaters, jackets, hats and scarves of any type (worn on the head or elsewhere) are to be removed. No bare midriffs, no tank tops, no leggings and no nylon stockings are permitted in the laboratory. Pant legs or skirt hems are not to drag on the floor.

11. Long hair is to be tied behind your head. Watches, rings, bracelets and any other material on your fingers or wrists is to be removed. Necklaces inside your clothes.

If you come to laboratory class unprepared, be prepared to be dismissed. No exceptions will be made!

III. General Regulations for Laboratory Conduct:

1. Do not insert medicine droppers into acid bottles or other reagent bottles.

2. The bench top must be kept free from unnecessary apparatus. No books other than the laboratory manual are permitted on the bench. No hats, jackets or sweaters are permitted on the bench or bench turret. They are to be stored in the Temporary Personal Storage area of the bench.

3. Never return unused chemicals to the stock bottles. Clean up spilled chemicals and dispose of them as directed by your instructor. Never leave spilled chemicals around for others to accidentally touch.

4. Wipe off reagent bottles that have had chemicals spilled down their sides. When pouring from reagent bottles, always put the label in the palm of your hand. This will prevent the label from being destroyed. When a cap is taken off a reagent bottle, always place the cap on the bench with the open end up. Placing it the other way will contaminate the cap with whatever is on the bench top. If you put a cap on the bench in the wrong way, do not return the cap to the bottle. Inform your instructor immediately.

5. Stock bottles are NOT to be removed from shelves or their position on the laboratory bench. When removing chemicals from bottles keep them in the trays. This will prevent contamination of the lab bench and confine spills within the trays.

6. When you use chemicals near the balances, be especially careful not to spill them on the balance. If you do, ask the Preparation Room Manager for a "balance brush". NEVER allow any chemicals to remain in contact with the

balance or the balance bench.

Brush the chemicals onto a sheet of paper and dispose of it as directed by your instructor. Return the balance brush to the Preparation Room.

7. If you are the last person to be using reagents at a balance, return the bottle and the spatula to the tray from which the bottle was first obtained. Be sure to close the bottle cap after each use of the chemical. **Never** allow the bottle to remain open without its cap. **CLOSE IT! NEVER** allow a spatula to stand in the bottle -**Take it out and close the bottle lid!**

8. Use the quantity of reagent recommended by your laboratory manual. Check the label twice, once before you open the cap and after you close it to be sure you have the correct chemical to use.

9. Do not use more distilled water than is necessary. Immediately clean up with paper towels any distilled water that has dripped on the floor near the carboys. Spilled water is very slippery on waxed floors. For large spills a mop may be obtained at the Preparation Room.

10. At the termination of your experimental work, the bench must be cleaned with a wet sponge. Even if it looks clean wipe it off with a wet sponge.

11. Examine all apparatus for defects before use. Check glassware for chips. You are not expected to use damaged, cracked or otherwise dangerous glassware or equipment.

12. Do not sit on the laboratory benches. Even though the bench looks clean and you have washed and wiped it, residual chemicals remain in the cracks and scratches. Just because you do not see the danger doesn't mean it isn't there.

13. Do not loiter in the laboratory after you have finished your work. The laboratory is a dangerous place -leave as soon as you complete your assignment.

14. Visitors are not permitted in the laboratory once experimental work is started. If you are to see someone, do it in the hall, **NOT** the laboratory.

15. You should wash your hands thoroughly before you leave the laboratory. Be sure to wash with soap. Wash your wrists and under finger nails to be sure chemicals have been removed. Any clothing contaminated with chemicals should be wash separately as soon as possible.

NOTE:

In the application of these rules, the student is to be as careful and considerate of the safety of his/her neighbors as he/she is of his/her own safety. Should interpretation of any of these regulations be necessary, the advice of the Chemical Hygiene Officer should be obtained.

Revised 2 / 17 H.S.F.
Chemical Hygiene
Officer

The location of the M.S.D.S forms for the Chemistry Department is room 321 Science Hall. Phone Number is 788-6962.

The location of the Chemical Hygiene Plan (CHP) for General Chemistry is in room 308. It is hanging on the wall next to the white board.