SAFETY PRACTICES IN THE ORGANIC CHEMISTRY LABORATORY

A. SAFETY REGULATIONS

1. The University is not responsible for damage to personal effects.
2. Whenever students are performing authorized laboratory experiments the laboratory instructor (or representative) is expected to be present.
3. Failure to comply with these regulations will result in reduction of grade.

In the chemistry laboratory, safety involves a cautious attitude and the realization of potential hazards. Each person in a laboratory is responsible for the safety of all persons present. An accident in a chemistry laboratory can seriously injure or kill people. Usually accidents can be anticipated and prevented. If safety precautions are followed, fewer accidents will occur. The number of laboratory accidents can be reduced if every student follows all of the directions given for the experiment. Special note should be taken of specific instructions that are given in an experiment to eliminate recognized potential hazards. Here are some general safety practices:

1. **Locate the safety equipment.** Find the eyewash, safety shower, fire extinguishers, fire blanket, first aid kit, and all exits that are to be used in an emergency.
2. **Protect your eyes.** Wear VISORGOG safety goggles at all times. Contact lenses are not recommended in the laboratory. Please speak to your instructor about special safety precautions if you insist on wearing them in the laboratory.
3. **Tie long hair back.**
4. **Wear shoes that cover all of your feet.** Since broken glass on the laboratory floor is all too common, your feet will need more protection than afforded by open-toed shoes or sandals.
5. **Wear clothes that will provide you with the maximum safety possible.** Do not wear shorts in lab. For cool protective clothing, hospital scrubs are ideal.
6. **Do not put any object in your mouth.** This is necessary to prevent the entry of any chemical into your mouth; objects include, but are not limited to, food, drink, cigarettes, fingers, pencils, pens, and pipets.
7. **Do not smell chemicals directly.** Use your hand to waft the odor to your nose if you are directed to note an odor in the experimental procedure.
8. **Do not engage in games or horseplay in the laboratory.**
9. **Do not perform unauthorized experiments.**
10. **Do not work in the laboratory in the absence of your laboratory instructor or his or her authorized representative.**
11. **Handle glass tubing with care.** Glass tubing is easily broken. When tubing (including thermometers) is to be inserted through a rubber stopper, the tubing must be lubricated with glycerin. Hold the tubing near the end that will be inserted and use a twisting
motion during insertion.

12. Use safe glassware handling procedures. Secure all glassware with clamps and place small reaction vials into a slightly larger beaker.

13. Open flames may never be used in the lab.

14. Gloves are available and should be worn.

15. Label all vials and/or containers appropriately.

16. The use of any personal entertainment device is prohibited in the laboratory.

B. HOUSEKEEPING RULES

1. Good housekeeping is vital. Clean your work area prior to and after an experiment.

2. Clean up broken glass immediately. Place broken glass in a broken glass container.

3. Clean up solid and liquid spills immediately with the aid of your instructor.

4. Do not pour any chemical into a sink without authorization.

5. Dispense all chemicals in the hood or near a balance.


7. Read the label on the stock bottle carefully.

8. Take no more of a chemical than the experiment requires. Carefully read the experiment and determine the quantity of each stock solution you need. Obtain only that amount. If you take too much, share with your neighbor: DO NOT RETURN EXCESS TO THE STOCK BOTTLE.

9. Do not put paper or other solid waste in the sinks.

C. DISPOSAL PROCEDURES

Disposal of waste and excess chemicals must be supervised by the lab instructor and carried out according to the following guidelines:

1. Aqueous solutions of acids and bases: These solutions should be poured down the drain with flooding amounts of water. If the concentration of the solution is > 1M, the solution should be neutralized first, then washed down the drain.

2. Organic solvents: Waste solvents must be collected in containers kept in a functioning fume hood. Separate containers are available for halogenated and nonhalogenated liquids. The containers will be disposed of through the Hazardous Waste Management Program.
3. Organic solids: Waste solids must be collected in a container kept in a functioning fume hood. The container will be disposed of through the Hazardous Waste Management Program.

4. Heavy metals, heavy metal salts, and aqueous solutions of heavy metal salts: Waste solutions will be collected for disposal.

D. ACCIDENT AND EMERGENCY PROCEDURES

Each individual should report any incident, no matter how small, to the lab instructor. The lab instructor will give a written report to the Head of the Chemistry Department and a copy to the chairman of the Safety Committee.

E. POLICY ON PREGNANCY

Although precautions are taken to minimize exposure to hazardous substances, some exposure is unavoidable. If you are pregnant or become pregnant during this course, you should take this course at a later time (dropping, if necessary). Any student who is pregnant during this course will be required to abide by the following rules in addition to the general lab rules:

1. The student must discuss with a physician the possible consequences to the fetus of participating in Chemistry Lab and provide evidence of this.

2. A statement of informed consent must be signed by the pregnant student and filed with the Department of Chemistry.

3. An approved respirator must be obtained and worn at all times during lab.

4. Gloves must be worn at all times during lab.

Lab Safety Statement

I have read carefully the discussion of good lab safety precautions and understand their importance for the safety and welfare of all the people in the lab. I recognize my responsibility to observe these practices and precautions while present in the lab. I understand that if I do not comply with these regulations, I will be asked to leave the lab and will receive a zero for that lab.

Name (printed) _______________________________ Signature ______________________

Course _______________________________ Date __________________________
DO NOT SIGN THE FOLLOWING STATEMENT UNTIL YOU HAVE TALKED TO THE INSTRUCTOR IN PERSON

Statement of Informed Consent Regarding Pregnancy

I have been informed there may be risks to my unborn child by being in the Chemistry Lab during my pregnancy. I have decided to take this class at this time against the advice of the Department of Chemistry, ASU and I agree to abide by the rules set forth in the "Safety Practices in the Chemistry Laboratory" pertaining to pregnant women. I accept responsibility for this decision.

Name (printed) ___________________________ Signature __________________________

Course ___________________________ ____________Date ___________________________