Chemistry Laboratory Course Safety Information and Acknowledgment
Fall 2009 Chemistry 31A

Read the following information, and when you have read and understand it, sign the safety acknowledgment form and give it to your TA at the beginning of your section this Thursday or Friday (9/24 or 9/25). You will not be allowed to participate in section activities until the form has been submitted.

The best way to prevent injuries to people and to the environment is to plan ahead. In each of your sections we will always discuss the particular safety concerns of that activity. In this document, some general rules and practices that apply to all sections are listed. It is your responsibility to know them all, so that the knowledge and experience you gain in transmuting matter does not come at a cost of injury to anyone or damage to the ecosystem. When done properly, research in chemistry is extremely rewarding.

Rules and Practices

Violation of any of these rules may result in expulsion from the section or from the course, depending upon severity.

1. During sections in which we will be doing activities other than purely paper-based group work, safety goggles must be worn <u>at all times</u> in the laboratory with no exceptions. It is permitted to wear contact lenses under your goggles. Students with prescription glasses need to wear goggles over their glasses.

2. Disposable nitrile gloves will be provided when necessary. Gloves must be worn at all times when using chemicals except when touching instruments, communal handles and doorknobs. Under no circumstances should you bring latex gloves to lab and use them instead of the nitrile gloves.

3. None of your skin (including your feet) should be visible except your head and hands, even when bending over the lab bench. Therefore, shirts that are not long enough to stay tucked in, short-sleeved shirts, skirts, and shorts are forbidden. Students dressed inappropriately for lab will be sent home and receive a score of zero for that week's section. The best way to dress for lab is to purchase a lab coat from Chemistry Stores, located in the Lokey Building. You will need a credit card.

4. Shoes with heels or shoes that do not completely cover the feet are prohibited.

5. All backpacks and other objects carried into lab must be accommodated on the shelves near the entrance door. If an object will not fit there, it must be taken out of the building.

6. If you are injured or harmed in any way, even minor cuts, tell your TA immediately. Both the Director of Undergraduate Laboratories and the Laboratory Coordinator are trained in first aid and CPR; at least one of them will be on duty whenever labs are running.

7. If a student near you has an accident, summon the TA immediately. Render aid to the affected student during the seconds that the TA is coming to the scene.

8. If you spill a corrosive chemical on yourself, remove the affected clothing immediately, and wash the area for 15 full minutes either in the sink, the eye wash, or if necessary in the safety shower. Your TA and the instructors will get you a blanket while you are in the shower.

9. Go to Vaden Health Center on Campus Drive East if instructed to do so by your TA, course instructor, or the Director of Undergraduate Laboratories. Transportation and/or escort will be provided if needed. For your own safety, failing to follow the instruction to report to Vaden is a very serious violation.

10. In case of fire, you may use the fire blanket supplied in each lab to smother the flames if anyone's clothing has ignited and you believe that the safety shower will be insufficient to douse the flames. The TA should perform this operation if possible. The individual must be dropped to the floor and rolled in the blanket. If no person is directly affected by the fire, exit the lab by whichever of the two doors is closest, and go outside to the assembly point shown to you by your TA in the first lab period. In the event of a fire alarm, evacuate the lab in the same manner.

11. In the event of an earthquake, take cover in the recesses under the lab benches until the shaking stops, and then evacuate the lab to the emergency assembly point (EAP) located on Mudd lawn.

12. Perform no unauthorized experiments.

13. **Only pure water can go down the sink.** Discard all chemical waste in the proper container: acid, base, or organic. Your TA will point out the appropriate waste receptacle at the beginning of each section activity. If any chemicals, particularly halogenated ones, go down the sink, it triggers an alarm and a shutdown of all research in the Mudd building. The consequences are bad for everyone, including you.

14. Rinse all disposable or broken glassware with water before discarding it in the broken glass waste container. Rinse all regular glassware thoroughly with water before placing it in the bins for the glassware washer.

15. Do not eat or drink anything while in the laboratory.

16. Do not invite anyone into the lab without permission from the instructor.

17. Any student who is pregnant should not perform laboratory experiments. Accommodation will be made if necessary to meet departmental requirements.

Material Safety Data Sheets (MSDS) for every compound that you will use are available on line. The list of every compound that exists in a lab, and any hazards that each one represents, is maintained in the bin outside the lab door.

You should be familiar with the NFPA Hazard Code (this figure, developed by the National Fire Prevention Association, appears on both chemical containers and labs)

Health (Blue):
4 Can cause death or major injury despite medical treatment
3 Can cause serious injury despite medical treatment
2 Can cause injury. Requires prompt medical treatment
1 Can cause irritation if not treated
0 No hazard

Flammability (Red):
4 Very flammable gases or liquids
3 Can ignite at normal temperatures
2 Ignites with moderate heat
1 Ignites with considerable preheating
0 Will not burn

Reactivity (Yellow):
4 Readily detonates or explodes
3 May detonate or explode with strong initiating force or heat under confinement
2 Normally unstable, but will not detonate
1 Normally stable. Unstable at high temperature and pressure.
0 Normally stable and not reactive with water.

Specific Hazard (White):
- Oxidizer – OX
- Acid – ACID
- Alkali –ALK
- Corrosive – COR
- Use No Water – ~~W~~
- Radioactive–

Safety Acknowledgment Form

Sign this page and bring it to your first lab period. You will be allowed to start work only after giving this signed form to your TA.

I have read and understand the safety information on the first three pages of this document. I agree to follow all of the rules listed above, as well as any instructions that my teaching assistant or an instructor may give me. I understand that violation of any of these rules will result in a lowering of my grade, and may result in my being sent home from lab or dropped from the course.

_____

Signature

_____

Print student name

_____

Student ID Number

_____

Print TA name

Course _____ Date _____

Fall 2009