

GENERAL CHEMISTRY LAB SAFETY PROCEDURES

Lafayette College

SAFETY must be the primary concern of everyone who works, studies, and uses laboratory facilities. Your TA will always inform you about the safety aspects of each experiment. Listen carefully. Become safety aware. Read the safety section of this lab manual conscientiously.

Proper attire - Students are expected to come prepared to work during their laboratory period. Anyone not properly prepared and equipped will be turned away until they meet the laboratory standards. This often means a time consuming trip back to a dorm to change clothing or pick up goggles.

Laboratory standards.

1. **GOGGLES** must be worn at all times in the laboratory. Students may store their goggles in their assigned drawer. This means they will enter the lab, walk directly to their drawer, open it and put on their goggles. Students choosing to take their goggles with them will put them on immediately on entering the lab. Eyeglasses or contacts may be worn under goggles, but are never considered safety protection alone. On leaving the lab for the day, students must finish all work, put everything away, then remove their goggles, place them in their drawer, lock it and then leave the lab directly. Staying in the lab to talk to a friend, the TA or the professor after goggles are removed is unacceptable. Students taking goggles with them may remove them when outside the lab.
2. **Dress Code** - Students allowed to work in the lab must be dressed in clothing which covers the body from shoulder to the ankles and shoes that cover the entire foot. Short sleeve shirts are allowed, but long sleeve shirts are preferred. Sleeveless shirts, midriffs, short skirts, lycra-type pants, stockings, sandals (toes or heels exposed) are NOT allowed. Students should have a set of acceptable clothing which they wear on their lab day. Students wearing unacceptable attire will be sent back to change. Additional protection such as lab coats or aprons is always welcome.

Long hair is always a danger in a lab setting. Hair which hangs below the jaw line when the head is bent down should be pulled back and confined.

Gloves are available in the stockroom for use when handling caustic, corrosive or organic materials.

Appropriate behavior - Students are expected to approach laboratory study in a serious manner with an open willingness to learn. Common sense and following instructions can avert most laboratory accidents.

Laboratory standards.

3. Students should follow directions explicitly. **No UNAUTHORIZED experiments** are allowed. Do not work in the laboratory except during regularly scheduled periods. Presence at other times requires specific authorization from your instructor, but NEVER work unless a faculty or staff member is present on the same floor. "Horseplay" or other careless acts are prohibited.
4. **No food, drink** or containers thereof are allowed in the lab. Gum chewing is not allowed. Pen and pencils must not be placed in the mouth in lab. Do not pipette with the mouth. If something is to be smelled, waft the fumes gently toward you.
5. **Reagent bottles in the hood should remain there.** Students should **always take OUT the amount of reagent they need** in the hood and then take them to their bench. (Some procedures must be done in the hood in their entirety.)

Reagent bottles cannot be compromised. **Student eyedroppers or spatulas cannot be used.** Contaminated reagents can and have affected the results of the whole section. If a reagent bottle has an eyedropper or spatula which is committed to it and placed there by the stockroom personnel, it may be used to help remove the material. **DO NOT RETURN UNUSED CHEMICALS TO THE REAGENT BOTTLE!**

6. **Spills** of any sort should be **reported** to a TA or professor. A student will be told how to clean up and assisted if necessary. Spills in the hood and the balance room must be **cleaned immediately.**

Breakage of glassware or equipment should be cleaned up by the student using the dustpan and brush in the lab. Glass is placed in the trash containers marked "GLASS" and other throwaways in the other trash containers.

7. Most chemicals use in this laboratory may be washed down the drain with lots of water unless otherwise instructed. The **TA will instruct students in the proper disposal** of such chemicals. Accidental improper disposal should be reported immediately to the TA or prof.

Accidents or Emergencies - Common sense and following directions can usually prevent most laboratory accidents.

Laboratory standards.

8. Use extreme **caution when heating** combustible materials. Never light a Bunsen burner without first thinking about the possibility of combustible materials being in range.
9. **Report any injuries** or feelings of illness which develop while in lab to the TA or professor immediately. **CONSULT INSTRUCTOR IMMEDIATELY IN THE CASE OF ANY ACCIDENT.**

Fires involving chemicals must be extinguished by different methods depending on the chemicals. For that reason only a trained professional can put out a laboratory fire. The professor and TA must be alerted immediately in case of fire.

10. The method of treatment for cuts, burns or skin exposure to chemicals must be decided by the professor and can involve anything from simple washing to complex procedures involving a trip to the Health Center or hospital depending on chemical exposure and severity.

If any **chemicals contact the skin, flush copiously with water** and consult the instructor for further treatment. When working with glassware, such as inserting a piece of glass tubing in a stopper, protect your hand with a towel.

Exposure or injury to eyes is a special case and requires IMMEDIATE attention. Seconds count. Get to an eyewash station as fast as possible while yelling loudly for help. Wash with water from **eye fountain 15 – 20 min.**

11. **Know the location** and uses of: showers, fire extinguishers, eye fountains, medicine cabinet (in stockroom)

Keep aisles free of obstructions. Backpacks or drawers left open can cause someone to trip and fall or bruise themselves. Backpacks should be left in Hugel 205, NOT in the lab.

A signed pledge to abide by these laboratory standards will be kept on file.