***Experiment 1***

***Safety in the Laboratory***

***OBJECTIVES***

The objectives of this experiment are: (a) to demonstrate familiarity with the safety rules and practices in the laboratory, (b) to locate the safety equipment in the laboratory, and (c) to become familiar with the use of safety equipment in the laboratory.

***INTRODUCTION***

The laboratory is a place where chemicals and equipment are usually stored and used. Most of these chemicals are hazardous and can be potentially **dangerous if mishandled**. This statement should not cause you to fear chemistry, nor should it keep you from exploring this fascinating science. Always remember that your safety is everyone else’s safety. As a college student, you are expected to behave in **a responsible manner** and cooperate with instructors and classmates. Together, we can achieve and maintain high safety standards.

***Tips for Students:***

* Wear eye protection at all times in the laboratory. The instructor **must** approve safety glasses or goggles.
* Clothing that covers most of the body and closed toed shoes are **required** laboratory attire.
* **Get to know where safety equipment** is located in the lab. The instructor will point out the locations of fire extinguishers, eyewash fountains, safety shower, fire blanket, and the exits.
* **Do not** bring food or drink to the lab.
* **Do not** bring visitors to the lab.
* Report **all** lab accidents to your instructor.
* To minimize lab accidents, you **must** come prepared. Carefully read and understand all the steps of the experiment **before** you start.
* When using chemicals, make sure you read labels carefully **before** you transfer any chemical from the reagent bottle.
* Waste should be disposed of properly. **DO NOT** dispose of chemicals or solids in the sinks. Check with your lab instructor for the appropriate methods of disposal.



Figure 1. Some common laboratory equipment.

*Students are required to watch a 15 minute safety video and then complete the Safety Quiz.*

## Safety Quiz

1. *True or False!*

1. Unused chemicals should be placed back in their containers. \_\_\_\_\_
2. Working alone in a laboratory is permitted. \_\_\_\_\_
3. Solid trash must be disposed of in special solid trash containers. \_\_\_\_\_
4. Leaving the work area clean is a must. \_\_\_\_\_
5. Small injuries do not need to be reported. \_\_\_\_\_
6. Water-soluble solids can usually be disposed of in the sink. \_\_\_\_\_
7. Organic liquids can usually be disposed of in the sink. \_\_\_\_\_
8. Procedures given in this lab manual can be altered without permission. \_\_\_\_
9. Food can be brought into the laboratory if it is kept in a backpack. \_\_\_\_\_
10. Broken glass can be disposed of with solid trash. \_\_\_\_\_

2. Record the location of the following safety equipment in your lab.

a. Eye wash

b. Fire blanket

c. Safety shower

d. Fire extinguisher

3. Consent Form:

By signing below, I understand and agree to the guidelines, rules, and safety procedures discussed today. Any violation of the rules will result in dismissal from the lab.

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_