

Introduction to the Lab Safety

(Quick Reference Guide)

Basic Rules of Lab Safety

Lab safety is important because it ensures a productive work environment free from accidents, lab mishaps, and injury. To help promote lab safety, there are several common practices that you can follow to ensure a safe and productive lab experience. These practices include:

- Proper Attire
- Personal Protective Equipment (PPE)
- Safe Environment
- Safety Equipment
- Following Directions

Proper Attire

Did you know that lab safety starts before you even leave the house? What you decide to wear actually has a big impact on safety.

Proper attire includes:

- A shirt that covers the torso and upper arms
- Long pants
- Short hair, or long hair that's tied back

Personal Protective Equipment (PPE)

Using the correct **PPE** or **Personal Protective Equipment** is also very important for your safety. It helps protect vital areas of your skin and face from harm.

For most general lab situations, PPE will consist of:

- Lab coat (fully buttoned)
- Safety glasses
- Latex or nitrile gloves

Safe Environment

With the proper clothing and PPE, it's time to enter the lab. Safety is just as important in the lab as it is with the types of clothing you wear.

When working in the lab, remember the following helpful tips:

- Do not bring food or beverages of any kind into the lab.
- After finishing your lab work, make sure to clean up after yourself.
- Put equipment away and thoroughly wash out any glassware.
- Keep space around safety equipment clear and easily accessible.

Safety Equipment

Even with the best preparations and safety precautions, unfortunate events can still occur. When working in any lab environment, you should familiarize yourself with the location and operation of each piece of safety equipment for use in the event of an emergency.

Common safety equipment when working in the lab includes:

- **First Aid Kit:** Use the first aid kit to treat minor cuts and scrapes.
- **Fire Extinguisher:** The fire extinguisher can put out small fires, but should not be used on people.
- **Eyewash:** In the event of injury or chemical contact with the face and eye, use the eyewash station.
- **Fire Blanket:** The fire blanket can smother a fire, especially on people.
- **Safety Shower:** Use the safety shower if a chemical spill comes in touch with skin.
- **Safety Data Sheet:** The SDS or Safety Data Sheet should be used before working with chemicals for spills or other accidents.
- **Phone:** In case of emergency, use the phone to call for fire, police or other emergency contacts.
- **Evacuation Route:** When all else fails, use the evacuation route to flee the emergency.
- **Lab Partner:** Never work alone.

Following Instructions

Probably the most critical piece of safety advice when working in a lab environment is to carefully follow all of the rules and procedures. That includes the ones we've already covered. Following instructions promotes a safe and productive lab environment.

Even something as simple as mixing two chemicals such as acid and water can be dangerous if you don't follow instructions. In that case, SDS or Safety Data Sheets provide critical information and instructions when working in the lab with chemicals and other substances.