

Laboratory safety

Laboratory safety should always be on your mind. Throughout this safety guide recommendations are provided, here are some general considerations that anyone in the laboratory should know.

- *General safety precautions for the laboratory.*

1. Follow all instructions carefully. Take special care when you see the word **Caution** in your laboratory instructions. Follow the safety instructions given by him your teacher.
2. Locate fire extinguishers and chemical and eye safety showers chemical spill washers and kits and alternate exit methods for laboratory evacuation.
3. Remember that smoking, eating or drinking in the laboratory room is totally prohibited.
4. Wear lab aprons when working with chemicals or hot or preserved materials samples.
5. Wear safety goggles when using hazardous chemicals, hot liquids, or stoves.
6. Any chemicals spilled on the hands or other parts of the skin should be washed off immediately with plenty of running water.
7. If you have an open skin wound, be sure to cover it with waterproof bandage.
8. Don't work alone in the lab.
9. Keep your work area clean and dry.
10. Turn on all electrical, water and gas equipment when not in use, especially in end of the laboratory period.
11. Tie back long hair.
12. Report all chemical spills or liquids to your teacher immediately for proper clean up.

•*Special precautions for working with heat or fire:*

1. Do not leave the lighted Bunsen stove for hot objects unattended. When the object is removed from the heat and left to cool, it must be placed in a place protected from fire.
2. Flammable liquid bottles should not be left open, not dispensed near a naked flame, hot electrical element or electric motor.
3. Use test tube holders to handle hot lab equipments.
4. When you heating something in a container such as a test tube, always point the open end of the container away from yourself and others.
5. Use only Pyrex glassware for heating.
6. Leave the hot material to cool before being transported from the laboratory station.
7. Make sure that the hoses of the Bunsen stove fit tightly.

•*Special precautions for working with chemicals*

1. Do not taste or touch materials in the laboratory without specific instructions.
2. Do not smell the material in the laboratory without specific instructions.
3. Use only materials from properly marked containers.
4. Wash your hands after working with chemicals.
5. Do not add water to the acid. Alternatively, dilute the acid by adding it to the water.
6. Mix heat-generating chemicals slowly.

•*Special precautions for working with electrical equipment.*

1. Make sure the area under and around the electrical equipment is dry.
2. Do not touch electrical equipment with wet hands.
3. Make sure that the area around the electrical appliances is free of flammable materials.

4. Turn off all power switches before plugging the device into an outlet.

• ***Special precautions for working with glassware and other laboratory equipments.***

1. Become familiar with the names and appearance of all laboratory equipments you will use

2. Never use broken or chipped glassware.

3. Make sure all glassware is clean before using it.

4. Do not pick up broken glass with your hands. Use a frying pan and brush.

5. If the mercury thermometer breaks, do not touch the mercury. Inform your teacher immediately.

6. Do not aim the mirror of your microscope directly at the sun. Direct sunlight can damage the eyes.

7. Use care handling all sharp equipment, such as scalpels and dissecting needle .

• ***Special precautions for working with live or preserved samples.***

1. If live animals are used handle them gently. Follow their care instructions.

2. Always wash your hands after working with living or preserved objects.

3. Anatomy samples must be properly fitted and supported. Do not attempt to cut a sample while carrying it in the air.

4. Do not open Petri dishes that contain live cultures unless you are instructed to do so.

5. Detergent (Dettol 5-10%) should be used to sterilize and clean benches, glassware and equipment.

6. A safety cabinet should be used while working with microbes.

7. Lab coats should be worn while working in the laboratory.

8. Disposable materials must be collected and sterilized.

•***First aid***

1. **Injuries**: Bleeding should be reduced with bandages. The wound should be cleaned with iodine-alcohol mixture, wrapped with a sterile dressing.
2. **Acid and fire burns** : Body burns should be immediately washed off with tap water. Eye burns should be washed off with eye wash, and a special cream can be used for burns.
3. **Poisoning**: If any toxic chemical ingested by which the mouth must be sensitized with water, in the case of acid, milk is drunk, in the state of alkaline, diluted acetic acid (vinegar).
4. **Skin contamination** requires washing with water and removing contaminants clothes, if the contaminants are insoluble in water, remove them with soap and water.