

Safety measures in accidental case

Eye accidents

- Flood your eyes immediately with water.
- For an acid, use dilute Sodium bicarbonate solution; for an alkali, use dilute boric acid solution.

Burns

- Acid burns: wash immediately with large quantities of water, then with dilute (8%) sodium bicarbonate solution. If burn is severe, wash again with water and apply the acriflavine.
- Alkali burns: wash immediately with water and 1% acetic acid solution.
- Bromine burns: wash immediately with ample supply of petrol, when the bromine will be completely removed from skin.
- Organic substances: wash immediately with soap and warm water.

Cuts

- Wash the wound with sterile gauze, soap and water. Disinfect with an antiseptic and apply a bandage.

Reagents in mouth

- If the reagents is in the mouth and not swallowed then spit out at once, and wash the mouth out repeatedly with water.
- If the substance like acid or alkali is swallowed, dilute by drinking much water. Then for acids follow by drinking much lime water. Milk may be given but no emetics.
- For salts of heavy metals give milk or white of egg.
- For arsenic or mercury compounds give emetic without any delay.

Gas poisoning

- Remove patient to fresh air and loosen clothing at neck. If breathing has stopped, give artificial respiration until the doctor arrives.

Proper Handling of Chemicals and Equipment

- Consider **all** chemicals to be hazardous unless you are instructed otherwise.
- Know what chemicals you are using. Carefully read the label *twice* before taking anything from a bottle.
- Never take *excess of reagents* than required.

- Excess reagents are **never** to be returned to stock bottles. If you take too much, dispose of the excess.
- Many common reagents, for example, alcohols and acetone, are highly flammable. **Do not use them anywhere near open flames.**
- Always pour acids into water. If you pour water into acid, the heat of reaction will cause the water to explode into steam, sometimes violently, and the acid will splatter.
- If chemicals come into contact with your skin or eyes, **flush immediately** with copious amounts of water and consult with your instructor.
- Never point a test tube or any vessel that you are heating at yourself or your neighbor- it may erupt like a geyser.
- Dispose of chemicals properly. Unless you are explicitly told otherwise, assume that only water may be put in the lab sinks. Some chemicals can be washed down the drain, while others require a different method of disposal. If a chemical can go in the sink, be sure to wash it away rather than risk an unexpected reaction between chemical 'leftovers' later.
- Report all chemical spills immediately to your lab supervisor.
- Small spills on bench or floor must be cleaned up immediately. Neutralize all acids and alkaline spills before cleaning.
- Be especially careful of spills around the balances.
- Before using burner, be sure nobody else on the bench has any organic solvents.
- Before getting any organic solvents, be sure nobody on your entire lab bench has an open flame.
- Never leave burners unattended. Turn them off whenever you leave your workstation. Be sure that the gas is shut off at the bench rack when you leave the lab.
- Never look down while opening of any container, including beakers, flasks, and test tubes.
- Do not use graduated cylinder for any purpose other than to measure a volume of liquid. Graduated cylinders should not be used to get reagent for an experiment or to run reactions.
- Never put a dropper into a reagent bottle. Instead, put the reagent in a beaker so you can bring it back to your desk and use dropper there.