

## First Aid in the Chemistry Laboratory

Accidents do not often happen in well-equipped chemistry laboratories if students understand safe laboratory procedures and are careful in following them. When an occasional accident does occur, it is likely to be a minor one. The following information will be helpful to you if an accident occurs.

### Important Terms

- 1) **carcinogenic** – causes cancer
- 2) **caustic** – burning away living tissue
- 3) **corrosive** – “eats away” tissue gradually
- 4) **irritant** – causes redness, inflammation
- 5) **poison** – causes toxic effects

### Condition and First Aid

If something happens, notify the teacher immediately! An accident report must be filled out. You should know the location of the **first aid kit** in the laboratory room.

#### 1) **Chemicals in the Eyes**

Getting any kind of a chemical into the eyes is undesirable, but certain chemicals are especially harmful. They can destroy eyesight in a very short time. Because you will be wearing safety glasses or goggles in the lab, the likelihood of this kind of accident is remote.

However, if it does happen, remove contact lenses and flush your eyes with water in the **eye wash** immediately. Do NOT attempt to go to the office clinic before flushing your eyes. It is important that flushing with water be continued for a prolonged time—10 or 15 minutes. While flushing is continuing, the school nurse should be informed.

#### 2) **Chemicals in the Mouth**

The likelihood of this kind of accident is unlikely. However, if it does happen, any chemical taken into the mouth should be spat out and the mouth rinsed thoroughly with water. Many chemicals are poisonous to varying degrees. Note the name of the chemical and notify the teacher and office clinic immediately.

If the victim swallows a chemical, note the name of the chemical and notify the teacher and office clinic immediately. If necessary, the office clinic will contact the Poison Control Center, a hospital emergency room, or a physician for instructions.

#### 3) **Chemical Spills on the Skin**

For a small area, flush the skin with water first. For a small acid or base spill on the skin, neutralize an acid with baking soda; neutralize a base with boric acid. For a large amount of chemical slipped on the body, use the **safety shower**. Take the victim to the school nurse.

(For water spills on the floor or counter – wipe up excess water with paper towels. If necessary, use the **water main valve** to turn the water off.)

#### 4) **Fire - Clothing or Hair**

A person whose clothing or hair catches on fire will often run around hysterically in an unsuccessful effort to get away from the fire. This only provides the fire with more oxygen and makes it burn faster. It is the responsibility of the teacher or the closest person to bring the **fire blanket** to the victim as quickly as

possible. Smother the fire by wrapping the victim in the blanket. Tell them “Stop, Drop and Roll!” Notify the office clinic immediately.

(For fire in the room itself: Depending on the circumstances: use the fire extinguisher, turn the burners off at the source and turn the **gas main valve** to shut off gas flow; unplug appliances, evacuate the room. Treat any persons affected by the fire according to the directions given above.)

5) **Bleeding from a Cut**

Most cuts that occur in the chemistry laboratory are minor. For minor cuts, apply pressure to the wound with sterile gauze, wash with soap and water, and apply a sterile bandage.

If the victim is bleeding badly, raise the bleeding part, if possible, and apply pressure to the wound with a piece of sterile gauze. While first aid is being given, someone else should notify the office clinic.

6) **Breathing Smoke or Chemical Fumes**

All experiments that give off smoke or noxious gases should be conducted in a well-ventilated **fume hood**. This will make an accident of this kind unlikely.

If smoke or chemical fumes are present in the laboratory, all persons—even those who do not feel ill—should leave the laboratory immediately. Make certain that all doors to the laboratory are closed after the last person has left. Since smoke rises, stay low while evacuating a smoke-filled room. Notify the office clinic immediately. Thoroughly ventilate the room before going back to work.

7) **Fainting**

If a person faints, lie the person down on the back. Position the head lower than the legs and provide fresh air. Loosen restrictive clothing.

8) **Shock**

People who are suffering from any severe injury (for example, a bad burn or major loss of blood) may be in a state of shock. A person in shock is usually pale and faint. The person may be sweating, with cold, moist skin and a weak, rapid pulse.

Shock is a serious medical condition. Do not allow a person in shock to walk anywhere. While emergency help is being summoned, place the victim face up in a horizontal position, with the feet raised about 12 inches. Loosen any tightly fitting clothing and keep him or her warm.