

SCIT 1407-8 Lab 1

Safety Instructions

Material Safety Data Sheets (MSDS)

Information about all chemicals used in this laboratory is available to all students and employees. This information is provided by chemical manufacturers as Material Safety Data Sheets (MSDS). The MSDS contains the following information:

First, the chemical and common name of all substances known to be a health hazard at a concentration of more than 1%;

Second, a description of the type of health hazard the chemical might cause;

Third, the route of entry for the hazardous material to the body

Fourth, precautions for safe handling of the chemical

Fifth, procedures for dealing with a spill or cleanup

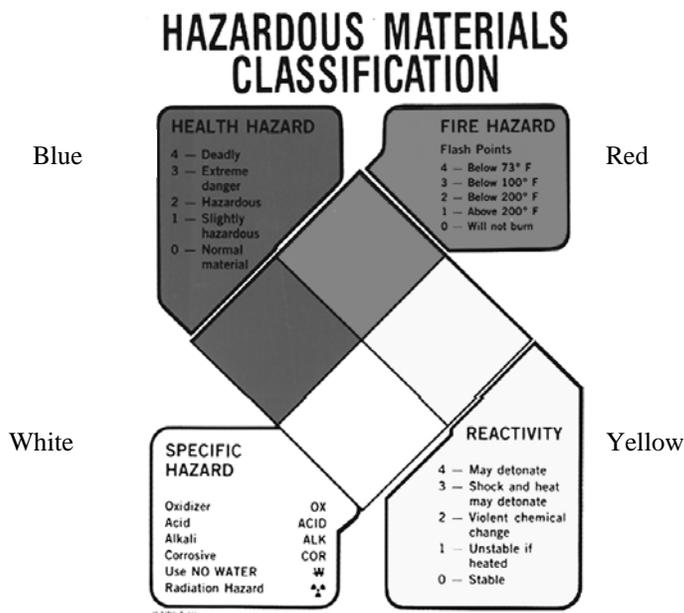
Sixth, proper emergency first aid procedures

Seventh, date of preparation, name, address, and telephone number of the company and/or employee who prepared the MSDS.

Our MSDS sheets are kept in a notebook in the laboratory prep room. Should you have questions about any chemical used in lab, you may ask your lab instructor to show you this notebook. You may have access to this information at any time, except when being tested over it.

Hazardous Material Labeling

All chemicals used in this laboratory will be labeled with standard Hazardous Material Warning Labels. These labels will identify the hazardous material and display an appropriate hazard warning. We will use the National Fire Protection Association (NFPA) labeling system for all our hazardous materials. This system uses four color-coded sections, each containing a numerical code. The color of the section indicates the kind of hazard, and the number code indicates how severe the hazard may be. The number four (4) indicates the most extreme hazard, while the number zero (0) indicates minimal hazard (all chemicals are assumed to have some degree of toxicity). The color code indicates hazard as follows: blue is a health hazard, red is a fire hazard, yellow is reactivity or instability hazard and white is for special hazards. Usually the white label will also indicate what the special hazard is.



Health Hazard (Blue)

4	Extreme	Highly toxic. May be fatal on short-term exposure. Special protective equipment required
3	Serious	Toxic. Avoid inhalation or skin contact. Can cause serious injury on short exposure
2	Moderate	Moderately toxic. May be harmful if inhaled or absorbed. Can cause temporary incapacitation or injury without prompt medical attention.
1	Slight	Slightly toxic. May cause slight irritation and can cause only minor residual injury.
0	Minimal	All chemicals have some degree of toxicity.

Toxicity means poisonous or causes cancer.

Irritant means tissues or membranes may be irritated, causing a rash or itching.

Corrosive means burns or other damage to skin.

Flammability Hazard (Red)

4	Extreme	Extremely flammable. Flash point below 73°F
3	Serious	Flammable. Flash Point 73°F to 100°F.
2	Moderate	Combustible. Requires moderate heating to ignite. Flash Point 100°F to 200°F.
1	Slight	Slightly combustible. Requires strong heating to ignite
0	Minimal	Will not burn under normal conditions

Most burning occurs when the substance is in the gaseous state. Any substance that exists as a gas or vapor will burn more readily than a liquid. Liquids that are volatile (change to a gas readily) will ignite easily.

Reactivity/Instability Hazard (Yellow)

4	Extreme	Materials that are readily explosive at room temperature and pressure
3	Serious	May explode if shocked, heated under confinement, or mixed with water
2	Moderate	Materials that are normally unstable, may react with water, but do not detonate.
1	Slight	Materials that are normally stable, but may react if heated or mixed with water, but not violently
0	Minimal	Normally stable, does not react with water.

Special Hazards (White)

W	Water Reactive	For a substance that is highly reactive with water
OXY	Oxidizer	For a substance that reacts violently with air or under gas explosive decomposition
AIR	Air Reactive	For a substance that is highly reactive with air
RADIOACTIVE		For a substance that is radioactive
CANCER CAUSING	Carcinogenic	For a substance that is carcinogenic

Fire, Bomb Threat, or Severe Weather Safety Procedures

In the event of a fire, bomb threat, or severe weather alert requiring evacuation of the building, the alarm system, located on the lab wall containing the clock and blackboard, will be activated. A siren will sound in the hall, and the alarm in the classroom will flash a strobe light to alert all present that a hazardous situation exists. At periodic intervals, the siren will cease and a voice will describe the action to be taken to avoid the hazard. Often this instruction will be to evacuate the building by the stairwell, which is located diagonally across the hall from lab. In the event of severe weather, the instruction may be to take cover in a central room with no windows, or to go to the basement. When the alarm in the laboratory is activated, take your purse or valuable personal property that can be carried in your hand, and go to the top of the stairwell. Wait there until you are told what to do to avoid the hazard. Then do it promptly. At least once

during each semester a drill will be conducted. In the event of a drill, go to the top of the stairwell and wait for instructions. Usually the instruction will be “This is a drill” or “All clear”. At the All Clear signal, return to your classroom. Elevators may not be used during a hazard evacuation. Personnel will be available to assist mobility-impaired students at the top of the stairwells. Mobility-impaired students should make their presence known to these persons.

Special Safety Equipment

In case of Fire, we have a fire extinguisher located on the post in the center of lab. Instructions for its use are printed on its side. Should a fire break out in lab, use this fire extinguisher to prevent its spread.

Also mounted on the post in the center of lab is a flame-retardant fire blanket. Should an individual's clothes or hair catch on fire, open the container and wrap the individual in the fire blanket. The individual should roll on the floor to smother the flames in his or her clothing or hair.

In case of chemical spills, there is a safety shower in the back of the room. Pulling the ring attached to the chain hanging from the shower will dump ten gallons of water from the shower. This will dilute chemicals that may have saturated an individual's clothing or skin during a spill. Be very careful not to pull the ring accidentally however, because there is no place for the water to go.

Should a spill splash in the eye, an eyewash station is provided over the sink on the lab wall opposite to the clock and blackboard. Open the bottle of eyewash fluid, hang your head over the sink, and irrigate your eye by squeezing the bottle. Notify your instructor immediately so the school nurse may be summoned to check the accident victim's eyes.

General Safety Procedures

In the event of an emergency which incapacitates your instructor, or in the absence of your instructor, you may call for emergency assistance by dialing **2224** on the lab phone located just inside the door to the prep room. If the prep room door is locked and you cannot access this phone, the closest phone is located across the hall in the office in A633. If this room is also locked, the next closest phone is in A640, the micro lab. If your instructor is available, he or she will make the call. If you must use a cell phone to call for assistance, the number is **214-860-2224**. This number will access campus security personnel who are authorized to call 911 and summon other emergency services. Be prepared to give campus security your room number (A632).

Do not eat, drink, or smoke in the laboratory. Wear gloves when handling biological specimens and materials. Do not go barefoot in lab. Discard all trash in appropriate containers, and biohazard trash should be placed in specially marked containers provided for this purpose. In the event of any injury, spill or other hazardous condition, the first thing to do is **notify your instructor**. Wash your hands when you come to lab, and again upon leaving. Carry no chemicals into lab, and carry no chemicals out with you. Always be conscious of laboratory safety and follow all instructions given by instructional personnel to insure your continued good health.