

SAFETY

I. General Information

A. The safety rules stated here in conjunction with the paper, Health and Safety in the Chemistry Labs published by the Environmental Safety Facility (ESF), should be adhered to while performing any laboratory work at UVM.

II. Chemicals

A. NEVER work alone.

B. NO EATING or DRINKING in the same area you are performing experiments. Never use beakers or other chemical glassware to drink from.

C. Read the labels on all reagent bottles before using them.

1. More information about handling a reagent can be obtained from its material safety data sheet (MSDS). These sheets are stored in the first floor stockroom or available online at <<http://ccinfoweb.ccohs.ca/ccinfoweb/main.html>>.

D. All chemicals with corrosive fumes (HCl, NH₄OH etc) or high vapor pressures (ethers, CH₂Cl₂ etc) should be handled in a fume hood.

1. If a fume hood does not seem to operating correctly, building maintenance at **656-2560** should be contacted.

2. One method of detecting if a hood is drawing properly is to tape a piece of tissue to the bottom of the sash. The tissue should be pulled into the hood if it is operating correctly.

III. Equipment

A. Emergency phones are located on the red fire cupboard in each hallway. Removing the handset from its cradle notifies security that there is an emergency on that floor of Cook.

B. Goggles or OSHA approved safety eye wear should be worn at all times in any chemical laboratory where experiments are being performed.

1. Goggles are required of anyone wearing contact lenses.

C. Shoes that cover your toes should be worn at all times. Sandals and other open-toed shoes are not permitted.

D. Long hair should be tied back.

F. Fire blankets are available in all of the undergraduate labs.

G. Fire extinguishers:

1. *Class B*, CO₂ fire extinguishers. There are 2 located in every lab room. These are suited for most chemical and electrical fires but can not be used to put out metal hydride fires.

2. *Class C*, NaHCO₃ dry fire extinguisher. There is one located in the red fire cupboard in the hallway on each floor. These are suited for liquids and electrical fires.

3. *Class D*, Metal-L-X fire extinguisher. There is one located in the red fire cupboard in the hallway on each hallway. These are for metal hydride and metal fires. As these cost about \$500 to recharge, do not use them unless necessary.

IF ANY FIRE SEEMS OUT OF HAND CLEAR THE ROOM AND CALL FOR HELP. NEVER TRY TO FIGHT A FIRE ALONE.

IV. Spills

A. Undergraduate Labs

1. If more than 15-20 mL of strong acid or base is spilled, send a student to the stockroom to get help. The TA should stay in the lab room and make sure students do not walk through the spill.
2. Small amounts of water solutions and volatile solvents can be wiped up.
3. For mercury spills, contact the first-floor stockroom or the ESF at **656-5400**.

B. Graduate Labs

1. Smaller spills should be handled by a graduate student.
2. Larger spills, a liter or more, should be handled by risk management at the ESF.

V. Injuries

- A. All students injuring themselves, no matter how minor, should be advised to go to the Student Health Center on East Ave.
- B. The first floor stockroom has band-aids and ointments for minor cuts and burns.
- C. For any cut or burn that looks at all serious, you should call for help. The emergency phones will place you in touch with security who will then alert the rescue squad. If you do not believe the injury is life threatening, let security know so that the rescue squad does not come with their sirens blaring. The rescue squad responds to all calls in matter of minutes.
- D. Medical help should not be attempted by any untrained person.
- E. An accident report sheet should be filled out and submitted to the Chemistry department office for all accidents no matter how minor. Report sheets may be obtained from the office or the stockrooms.

VI. Toxic Waste

- A. Toxic waste must be placed in appropriately labeled jars. See classification sheet for how to separate chemical wastes.
- B. Labels need to identify the room in which the waste was generated, the person or persons adding the waste, the date waste was added, and the names of the compounds added. **DO NOT USE FORMULAS**, you must write the name of the compound.
- C. Syringes must be placed in red plastic safety buckets. Syringes may not be put in the broken glass receptacle.
- D. Broken glass must be placed in a broken glass container. Broken glass is disposed into landfills, so paper should never be placed in a broken glass receptacle.