Laboratory Safety Reminders

MOUNT HOLYOKE *Environmental Health and Safety ♦ September 2009*

Safety Handbook

The Science Center Safety Handbook contains College safety policies and procedures for the use of hazardous chemicals in the laboratory. The Handbook is available on the web at: www.mtholyoke.edu/go/ehs. The Handbook should be consulted for additional information on the "reminders" provided here, information on specific chemical hazards, and procedures for controlling hazards.

Material Safety Data Sheets

➢MSDS, provided by the manufacturer, describe the physical and health hazards of chemicals. MSDS are available in the Biology and Physics department offices, Carr LL11 for Chemistry, Reese 128 for Neuroscience and Behavior, and Clapp 9C for Earth and Environment.

Personal Injury

➢ Stay in the lab where there are people to help.
➢If first aid is needed; call Public Safety at ext. 1911.
➢In the event of chemical contamination, flush the area immediately.
➢All instances of eye contamination or visible tissue damage must be checked at a medical facility.
➢Persons going to the Health Center should be escorted.
➢All injuries must be reported. Forms are available in the Safety Handbook, on-line and in department offices.

Fire Alarms

When the alarm rings:
➢Turn off equipment that should not be left unattended.
➢If you are working in a fume hood, close the hood.
➢Turn off room lights and close the door on the way out.
➢Assemble by class group away from building entrances.
➢Do not reenter the building or leave until told to do so.

Laboratory Fires

To prevent lab fires:
➢Control sources of flames, sparks, and heat and keep them away from combustible materials and flammable vapors.
➢Use flammable solvents in a fume hood.
➢Never leave open flames unattended.
➢Do not use electrical equipment with frayed cords.
➢Evaluate each experiment for fire hazards before beginning.
In the event of a fire:
➢For small fires (e.g., in a beaker) smother with a non-flammable material.
➢If the fire is in a hood, close the sash.
➢Alert others in the room to: turn off equipment, evacuate, and pull the fire alarm.
➢Do not apply water to chemical fires.
➢If clothing or hair is on fire, drop to the floor and roll or drench in safety shower.
➢ Students should only use extinguishers to aid in evacuation, once an exit route is clear evacuate immediately.

Personal Protective Equipment

➢Closed shoes must be worn with hazardous chemicals, biohazards, or radiation hazards in all labs.
➢Splash goggles must be used whenever there is a splash hazard.
➢Additional department and faculty requirements for eye protection must be followed.
➢Lab coats must be worn when using greater than one liter of an acute toxin, a select carcinogen or a reproductive toxin, that is readily absorbed through the skin (list in Safety Handbook); and when handling concentrated acids or bases.
➢Latex gloves are not chemically resistant and should not be used when handling chemicals.
➢If chemically resistant gloves are needed, they should be chosen based on resistance to the chemical being used.

Campus Emergency Number
1911
Cell Phone or Off-Campus
413.538.2304

Personal Hygiene and Housekeeping

➢Do not store or eat food or drink in the lab.
➢Do not apply cosmetics or handle contact lenses in the lab.
➢Wash hands after removing gloves and before leaving the lab.
➢Do not wash lab coats with regular clothes.
➢Do not wear lab coats in areas where food is consumed.
➢Keep the lab clean and organized.
➢Return chemicals to storage areas.
➢Keep aisles and safety equipment free of obstructions.
➢All chemical containers must be labeled with the chemical name. Storage containers greater than one liter must also list the hazard.
➢Chemical containers near sinks or drains must be in secondary containment.

Laboratory Procedures

➢Follow lab handout and verbal instructions carefully and ask if you have questions.
➢Be aware of the hazards of the chemicals used. Read the labels.

Fume Hoods

➢Volatile chemicals, and solids that are fine particles should be used in a fume hood.
➢Remove any equipment and chemicals from the hood that you are not using.
➢Keep hood sash at or below the 15-inch height marked with red arrows.
➢Set up equipment at least six inches from the front edge of the hood.
➢Check to make sure there is airflow before using a hood (hold a piece of kimwipe at the face of the hood).
➢Close the sash when not using the hood.

Spills

➢Report all spills to the faculty member.
➢If there is a fire or health threat call Public Safety at ext. 1911.
➢Do not attempt to clean up spills without faculty supervision.
➢Spill clean up supplies are available in each department.

Working After Hours or Alone

➢ All independent research must be approved by the supervising faculty member.
➢Students in course sections are not allowed to work after hours and can not work alone at any time.
➢Research students cannot work alone and must have written permission to work after hours, from 9 pm to 7 am.
➢Research students can only work between midnight and 7 am when the experiment requires that work be done in that time frame.
➢Please read the details of this policy in your safety training packet. It is also in the Safety Handbook.

Waste Disposal

➢Many wastes require special handling to protect students, employees and the environment. Always check with your faculty member if the proper disposal method is unclear.
➢Chemical waste classified as Hazardous Waste must be collected in screw top containers with red and white Hazardous Waste labels.
➢Labels must list all the chemicals present - do not use abbreviation or chemical formulas. Labels must also include the hazard, e.g., flammable, corrosive, oxidizer, reactive, toxic.
➢Waste containers must be kept closed except when waste is being added.
➢Only one bottle of each type of waste can be kept in the lab.
➢Date the container, and request a waste pick-up as soon as the container is full. In Chemistry, contact Maisie Shaw, all other Departments should contact Lori Smith (lbsmith, ext. 3554).
➢Hazardous waste includes all flammable solvents, chlorinated solvent, strong acids ($pH \leq 2$) or bases ($pH \geq 12.5$) and most toxic chemicals.
➢Needles and syringes must be put in plastic sharps boxes.
➢Broken glass and other sharp objects, such as razor blades, must be put in the cardboard "broken glass" box in the lab.
➢Waste, which is a biohazard, must be collected in red bags and autoclaved or sent offsite for disposal.

Some Health Hazard Definitions

Acute Toxins - substances that may be fatal or result in significant health effects as a result of a single expo- sure or exposure of short duration.

Reproductive Toxin - substances that can affect reproductive capacity, which include mutagens (affect genetic material), teratogens (affect embryo or fetus), and substances affecting fertility.

Select Carcinogen - substances that are suspected or known to cause cancer in humans.

Questions

If you have questions ask your faculty member or contact Environmental Health & Safety (ext. 2529, env-health-safety).