

## I Just Spilled Some Chemicals. Now What?

By Stephen R. Larson, Director



**Minor spills (Type A)** that can be safely cleaned in-house

### C. Minor spill of a highly toxic chemical outside a fume hood

All high toxicity chemicals require a written Safety Plan which contains a special spill or release response section. Call x66911.

### D. Major spill of a highly toxic chemical anywhere

All high toxicity chemicals require a written Safety Plan, which contains procedures for containing the spilled or released materials and restoring the laboratory or other area to safe condition. Call x66911.

When the Public and Environmental Safety staff is notified of a chemical spill or release by dialing x66911, a Tufts Police Officer will respond to the nearest safe location generally the hallway outside the laboratory or room in which the spill has occurred. Tufts Police will gather and transmit information to the Principal Investigator responsible for the hazardous material via telephone. In addition, the Tufts EHS staff will be contacted to provide technical guidance to the Officer, the Principal Investigator and the laboratory staff involved in the spill or release.

The first priority is first aid for persons exposed to the chemical. Typically this is flushing of skin, eyes and if necessary removal of contaminated lab coat or clothing outside the spill area. The Officer will request emergency medical services (EMS) while assisting with first aid.

The second priority is identifying the perimeter of the spill zone and evacuating all persons from that zone. If the spill occurs in a hallway, stairway or elevator the evacuation zone could be the local area or the entire building depending on the volatility of the spilled materials and their toxic, irritating and nauseating effects by inhalation.

In general, if a chemical exposure has occurred, or building wide evacuation is necessary, then the local fire department will take command of the area or building. Tufts Police, Fire Marshal and Tufts EHS staff will work cooperatively to identify the hazardous material, the amount spilled or released, the degree of hazard, and a plan to control the hazard and restore the room, area or building for normal use.

Anyone handling chemicals in a laboratory, shop, studio, clinic or food service knows that spills (solids, liquids) and releases (gases, vapors) can occur at any time. Hence, procedures should be in place and equipment and supplies available to clean up the spill or control the release.

**NOTE:** These procedures are described in the *Tufts Emergency Response Guide* and in the *Tufts Red Book-Research and Laboratory Safety Guide*. Electronic copies are available on the Tufts EHS webpage. Paper copies are also available upon request.

The primary concern in any chemical spill/release is controlling exposure to the person spilling the chemical or other persons in the area. Any chemical coming into contact with the eye, mouth, nose or skin must be flushed off immediately using an emergency eyewash or shower. All contaminated clothing must be removed to prevent breakthrough onto the skin. Flush for 15 minutes before seeking medical attention. Wearing laboratory coats will prevent the need to remove street clothes and underwear. Tufts Police should be notified at x66911 if a chemical exposure has occurred or could occur if persons are not evacuated from the room or the building!

At Tufts, there are four types of chemical spills:

### A. Minor spill (less than 1/2 liter) of a hazardous chemical

Laboratories are supplied with acid/base/solvent cleanup kits for cleanup of minor chemicals spills. If there is no exposure to lab staff, the staff should identify the spill zone and clean the spill from the perimeter of the zone to the center using standard protective gear-laboratory coat, goggles and chemical resistant gloves

### B. Major spill (more than 1/2 liter) of a hazardous chemical

The laboratory staff should be evacuated if there is a potential for toxic, nauseating or irritating vapors to be produced in the spill area. Major spills generally require the assistance of outside hazardous materials cleanup firms, under the guidance of the Tufts EHS staff. Call x66911.

*These procedures are described in the Tufts Emergency Response Guide and in the Tufts Red Book-Research and Laboratory Safety Guide.*