



SAFETY UNLIMITED, INC.

Weekly Safety Meeting

Laboratory - Chemical Spill Response

Many spills in the laboratory work area can be prevented. Development and implementation of good laboratory practices will significantly reduce the likelihood of spills.

In spite of our best efforts, spills happen. When they do, it makes sense to respond to them as carefully and efficiently as possible.

One thing is clear, however. A professional response to spills, from planning to properly using cleanup equipment, will reduce the eventual costs (in injury, pollution, dollars, pride, and job security).

The good news is that for many laboratory spills, you may be able to safely clean them yourself. Not only does that save time, your initiative demonstrates your accountability for maintaining a safe laboratory.

If handled properly, a spill may be nothing more than a nuisance. If handled improperly, a spill can seriously disrupt your activities and the work of your colleagues. At worst, a spill can cause bodily harm or property damage.

In most cases, laboratory spills involve small quantities of materials and, if precautions are taken, present minimal hazards. Laboratory workers are usually the most appropriate people to clean up their spills because they are more likely than others to be familiar with the spilled material's hazardous characteristics, respond at least as quickly as, and usually more quickly than, anyone else, know about other potential hazards or complicating factors in their work area, and be familiar with the proper cleanup techniques for a particular spill.

Emergency Preparedness:

To prepare for spills, you should:

1. Learn about the hazards of the chemicals in your laboratory;
2. Write response procedures to address those hazards; and
3. Make sure that you have the equipment and training necessary to follow those procedures.

Know Your Hazards:

As an integral part of any laboratory work, you must identify the hazardous or potentially hazardous properties of all chemicals used or produced in your laboratory. Before using any chemicals, you should evaluate the consequences of potential spills and develop appropriate response procedures. If necessary, consult published data (such as safety data sheets and chemical dictionaries) for response planning. Additionally, communicate potential hazards to other workers in your area.

When planning laboratory work and preparing for potential problems, determine the hazard class of all the chemicals to be used.

The following chemical properties are of most concern when preparing for possible chemical spills:

- Flammability;
- Reactivity to air or water;
- Corrosion; and
- High toxicity.

Procedures for Cleaning Up Simple Spills:

Before cleaning up a simple spill, be sure that you can do so safely. You must have the right personal protective equipment, including, at a minimum, appropriate eye protection, protective gloves, and a lab coat. Additional protective equipment may be required for spills that present special hazards (such as corrosive or reactive spills, or spills that have a splash potential).

As a rule of thumb, if you need a respirator, you should request outside assistance because you do not have a simple spill.

The following steps should be taken during spill cleanup:

1. Prevent the spread of dusts and vapors;
2. Neutralize acids and bases, if possible;
3. Control the spread of the liquid;
4. Absorb the liquid;
5. Collect and contain the cleanup residues;
6. Dispose of the wastes; and
7. Decontaminate the area and affected equipment.

Ventilating the spill area may be necessary. Open windows or use a fan unless the area is under negative pressure. In some instances, your environmental health and safety officer can test the air to ensure that hazardous vapors are gone. For most spills, conventional cleaning products, applied with a mop or sponge, will provide adequate decontamination. If you have any question about the suitability of a decontaminating agent, seek expert advice.

If you are aware of it, take care of it!!

Safety Meeting Sign-In Sheet

Supervisor:	Subject:
Location:	Date:
Conducted By:	Trainer Signature:

Name (print clearly)	Signature	Comments / Safety Concerns / Training Requests

