



# The Laboratory Safety Institute's

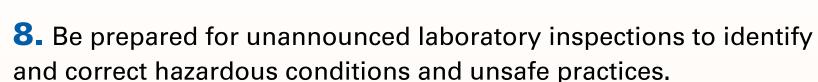
# LABORATORY SAFETY GUIDELINES

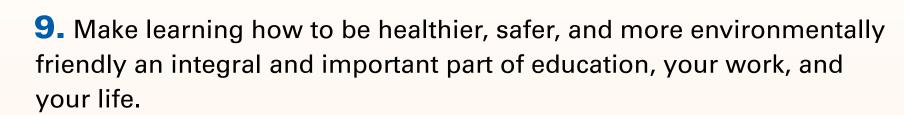
### **Safety Program Elements**

- 1. Follow your written health, safety and environmental affairs (HS&E) policy statement.
- 2. Organize a departmental HS&E committee of employees and management that will meet regularly to discuss HS&E issues.
- 3. Attend an HS&E orientation for all new employees.
- 4. Encourage peers to care about their health and safety and that of others.



- **5.** Get involved in your safety program!
- 6. Make safety part of your day-to-day job.
- 7. Read your lab safety manual.





- 10. Participate in regular departmental safety meetings for all employees to discuss the results of inspections and aspects of laboratory safety.
- 11. Before conducting experiments with hazards or potential hazards, ask yourself these questions:
- •What are the hazards?
- What regulatory standards apply to these hazards?
- What are the prudent practices, protective facilities and personal protective equipment necessary to minimize the risk of exposure to the hazards?



- 12. Don't allow experiments to run unattended unless they are fail-safe.
- **13.** Extend the safety program beyond the laboratory to the automobile and the home.



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- 14. Allocate a portion of the departmental budget to safety.
- **15.** Maintain a centrally located departmental safety library. See **www.fishersafety.com/lab** for a list of resources.
- **16.** Develop specific work practices for individual experiments, such as those that should be conducted only in a ventilated hood or involve particularly hazardous materials. When possible, most hazardous experiments should be done in a hood.
- 17. Every pre-experiment discussion must include consideration of the health and safety aspects.

# **Emergency Planning**

- 1. Develop plans and participate in drills for dealing with emergencies such as fire, explosion, poisoning, chemical spill or vapor release, electric shock, bleeding and personal contamination.
- 2. Display the phone numbers of the fire department, police department, and local ambulance either on or immediately next to every phone.
- 3. Have an appropriate supply of first aid equipment on hand and instruction on its proper use.



#### **Prudent Practices**

- 1. Never work alone in any laboratory and always obtain prior approval of a supervisor.
- 2. Never smoke, eat, or drink in the laboratory.
- **3.** Do not store food in chemical refrigerators.



- 5. Use warning signs to designate particular hazards.
- **6.** Use appropriate eye protection at all times in laboratories and areas where chemicals or biologicals are transported.
- 7. Develop a system for the legal, safe and ecologically acceptable disposal of chemical wastes.
- 8. All incidents must be reported, evaluated by the departmental safety committee, and discussed at departmental safety meetings.

#### **Protective Facilities**

- 1. Have adequate supplies of personal protective equipment on hand, including safety glasses, goggles, faceshields, gloves, lab coats, and benchtop shields.
- 2. Ensure fire extinguishers, safety showers, eyewash fountains, first aid kits, fire blankets and fume hoods are present in each laboratory and test or check monthly. Activate showers and eyewashes weekly.
- 3. Ensure guards are on all vacuum pumps and secure all compressed gas cylinders.



- **4.** Remove all electrical connections from inside chemical refrigerators and use magnetic closures.
- **5.** Utilize grounded plugs on all electrical equipment and install ground fault interrupters (GFI's) where appropriate.

## **Chemical Safety & Storage**

- 1. Maintain a chemical inventory to avoid purchasing unnecessary quantities of chemicals.
- 2. Label all chemicals to show the name of the material, the nature and degree of hazard, the appropriate precautions, and the name of the person responsible for the container.



- 3. Develop a program for dating stored chemicals and for recertifying or discarding them after predetermined maximum periods of storage.
- 4. Provide secure, adequately spaced, well-ventilated storage of chemicals.
- 5. Store only minimum amounts of flammable liquids in each laboratory.
- **6.** Store acids and bases separately. Store oxidizer acids separately. Store fuels and oxidizers separately.
- 7. Use fireproof cabinets for storage of flammable chemicals.





