

Important Lab & HPLC Safety Guidelines



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Safety guidelines to protect laboratory staff from health hazards while working with liquid chemicals.

1. Always make sure your safety standards are up to date.
2. Have a written health, safety and environmental affairs (HS&E) policy statement.
3. Organize a departmental HS&E committee of employees, management, faculty, staff and students that will meet regularly to discuss HS&E issues.
4. Develop an HS&E orientation for all new employees and students.
5. Encourage employees and students to care about their health and safety and that of others.
6. Always ensure that your equipment is in good condition.
7. Avoid solvent evaporation at its source: Close your mobile phase bottles and waste containers tightly. Use appropriate valves and exhaust filters.
8. Involve every employee and student in some aspect of the safety program and give each specific responsibilities.
9. Require all employees to read the appropriate safety manual. Require students to read the institution's laboratory safety rules. Have both groups sign a statement that they have done so, understand the contents, and agree to follow the procedures and practices. Keep these statements on file in the department office.
10. Allow only minimum amounts of flammable liquids in each laboratory.
11. Do not allow food or drinks to be stored in chemical refrigerators.
12. Develop plans and conduct drills for dealing with emergencies such as fire, explosion, poisoning, chemical spill or vapor release, electric shock, bleeding and personal contamination.
13. Require good housekeeping practices in all work areas.
14. Display the phone numbers of the fire department, police department, and local ambulance either on or immediately next to every phone.
15. Store acids and bases separately. Store fuels and oxidizers separately.
16. Maintain a chemical inventory to avoid purchasing unnecessary quantities of chemicals.
17. Use warning signs to designate particular hazards, according to the safety data sheets of the regarding chemicals.
18. Conduct periodic, unannounced laboratory inspections to identify and correct hazardous conditions and unsafe practices. Involve students and employees in simulated OSHA inspections.
19. Make learning how to be safe an integral and important part of science education, your work, and your life.
20. Schedule regular departmental safety meetings for all students and employees to discuss the results of inspections and aspects of laboratory safety.
21. Require that all accidents (incidents) be reported, evaluated by the departmental safety committee, and discussed at departmental safety meetings.
22. Don't allow experiments to run unattended unless they are failsafe.
23. Forbid working alone in any laboratory and working without prior knowledge of a staff member.
24. Develop specific work practices for individual experiments, such as those that should be conducted only in a ventilated hood or involve particularly hazardous substances. When possible most hazardous experiments should be done in a hood.
25. Allocate a portion of the departmental budget to safety.
26. Require the use of appropriate eye protection at all times in laboratories and areas where chemicals are transported.
27. Provide fire extinguishers, safety showers, eye wash fountains, first aid kits, fire blankets and fume hoods in each laboratory and test or check monthly.
28. Provide an appropriate supply of first aid equipment and instruction on its proper use.
29. Provide fireproof cabinets for storage of flammable chemicals.
30. Maintain a centrally located departmental safety library.
31. Require grounded plugs on all electrical equipment and install ground fault interrupters (GFI's) where appropriate.
32. 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.
33. Develop a program for dating stored chemicals and for recertifying or discarding them after predetermined maximum periods of storage.
34. Develop a system for the legal, safe and ecologically acceptable disposal of hazardous wastes.
35. Provide secure, adequately spaced, well ventilated storage of chemicals.
36. **If you think your safety measures are expensive - calculate the costs of an accident!**

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