

Appendix E

Laboratory Safety Audit

Use this checklist as an easy way to evaluate your laboratory for safety. Add items that might be special concerns in your laboratory. Make notes about any areas that could use improvement. Let several people take the survey and compare results. Repeat this survey once or twice a year to see if you made improvement.

Y N n/a General Laboratory Safety

- 1. Lab workers receive required safety training (see Chapter 5, Appendix C).
- 2. Lab workers have access to MSDS information on all chemicals that they use.
- 3. Safety showers and eye washes are available within 10 seconds travel.
- 4. A spill cleanup kit is available (See Chapter 5).
- 5. All reagent bottles are labeled clearly with chemical name, date and hazard.
- 6. All chemical containers are capped and sealed when not in use.
- 7. Centrifuges, incubators, refrigerators and ovens are clean for the next user.
- 8. People do not work with hazardous chemicals alone in the lab.
- 9. Passageways to exits are clear.
- 10. Areas are clear around safety showers, fire extinguishers, fire blankets and electrical controls.
- 11. Sinks are available for hand washing.
- 12. Water is run into seldom used drains to prevent dry traps.
- 13. The blue / yellow "Laboratory Emergency Information" sheet (see Chapter 5) is completed and posted.
- 14. Laboratory has a Sharps Policy if sharps are used.

Y N n/a Chemical Hygiene

- 15. There is no food or drink in the laboratory.
- 16. Lab refrigerators are labeled "Not for food and drink."
- 17. People never use mouth suction for pipetting.
- 18. Organic solvents, volatiles and airborne hazards are used in a fume hood.
- 19. Eye wash / safety shower available, personnel are trained in their use.

Y N n/a Chemical Storage

- 20. Flammable solvents, corrosives or reactives are **not** stored above eye level.
- 21. Chemicals stored according to compatibility (See Appendix F).
- 22. A fire safety can is used with more than one gallon of flammable liquid.
- 23. Flammable materials are not stored above refrigerators or freezers.
- 24. Flammable materials are kept in UL approved flammable storage cabinets.
- 25. Flammable storage areas are not used to store miscellaneous materials and equipment.
- 26. Shatterproof containers are used for flammable liquids whenever possible.
- 27. Refrigerators labeled to show whether or not they are approved for flammable liquids.
- 28. All liquid chemicals in refrigerators and freezers are stored in plastic trays.
- 29. No more than 10 gallons of flammable liquid is stored outside of a storage cabinet.
- 30. Materials that may become hazardous with prolonged storage (e.g., diethyl ether) are dated when they are first opened.

Y N n/a Laboratory Waste Disposal

31. Proper receptacles for solvents, glass, paper, sharps and radioactive waste are present.
32. Hard plastic sharps containers are used for the collection of razor blades, scalpel blades and needles.
33. A strong, lined corrugated box is used for the disposal of clean laboratory glass.
34. A Safety Department carboy is used for the disposal of organic solvents.
35. All containers for waste chemicals are labeled "Hazardous Waste."
36. An area is available to collect unneeded chemicals for Safety Department removal.
37. If radioactive or infectious waste is generated in your lab, requirements in the Radiation Safety or Biological Safety manual, as appropriate, are followed.

Y N n/a Instrument and Equipment Use

38. All users have been trained in proper operating and safety procedures.
39. Areas around instruments and equipment are clear.
40. Vacuum pumps have cold traps to prevent volatiles from getting into pump oil.
41. Equipment with moving parts (e.g., a belt-driven pump) have safeguards.
42. Dewar flasks and vacuum dessicators are taped or guarded.
43. Oil baths and hot plates are not left unattended.
44. Gas cylinders are secured.
45. Bunsen burner hoses are in good condition.

Y N n/a Personal Protective Equipment

46. Safety glasses or goggles are worn by everyone in the laboratory.
47. All personal protective equipment is inspected periodically for wear and deterioration.
48. Contamination free lab coats are worn when working in the laboratory.
49. Rubber or plastic aprons are worn when using liquid caustics or corrosives.
50. Goggles are used when using liquid corrosives or caustics.
51. Full face shields are worn over safety glasses when working with large quantities of reactive chemicals.
52. Special UV glasses are worn when working with ultraviolet radiation.
53. Proper eye protection is used when working with lasers.
54. Gloves are worn when there is any risk of skin contact with a laboratory chemical.
55. Correct gloves are used to provide protection for specific chemicals (see glove chart in Chapter 4).
56. Heat resistant gloves and tongs are available to handle hot items.
57. No open toed shoes nor shorts are worn in the lab.
58. Respirators are not used without proper training (call the Safety Department for details).

Y N n/a Fume Hoods

59. Hoods have a strip of tissue taped to their sash or some other means to indicate proper air flow.
60. Hoods are clear, front to back for good air flow.
61. Hazardous material is kept at least 15 cm behind the plane of the sash

- 62. Hoods have a current Safety Department inspection sticker (hoods should be checked annually).
- 63. Sash is kept down except when working in hood.
- 64. Hoods are not used to store chemicals and apparatus.
- 65. Sash on hood is not raised past the marks on the inspection sticker.
- 66. Perchloric acid is used only in approved wash down hoods.

Y N n/a Fire Safety

- 67. Fire and stairwell doors are closed at all times.
- 68. People have been trained to operate fire extinguishers (if not call Safety).
- 69. Lab doors are closed at the end of the work day.
- 70. Lab has a fire evacuation plan.
- 71. People know the location of fire extinguishers and alarms.
- 72. Policy restricts bench top accumulation of flammable chemicals to the amount needed for current procedures.
- 73. If your laboratory has a sprinkler system, there is a minimum of 18 inches of space below the ceiling sprinkler deflectors.
- 74. Explosion proof electrical equipment is used when working with flammable liquids.
- 75. Immersion heaters are used only when supervised.
- 76. There are no space heaters in your laboratory.

Y N n/a Electrical Safety

- 77. Circuit breaker boxes are unobstructed and all breakers are labeled.
- 78. All appliances have three pronged grounded plugs and are UL approved.
- 79. All wiring is in good repair.
- 80. There are no extension cords being used.

