

LABORATORY SAFETY INFORMATION

Safety in the Chemistry Lab

Working in the chemistry laboratory is an interesting and rewarding experience. During your labs, you will be actively involved from beginning to end—from setting some change in motion to drawing some conclusion. In the laboratory, you will be working with equipment and materials that can cause injury if they are not handled properly. However, the laboratory is a safe place to work if you are careful. Accidents do not just happen, they are caused—by carelessness, haste, and disregard of safety rules and practices. Safety rules to be followed in the laboratory are listed below. Before beginning any lab work, read these rules, learn them, and follow them carefully.

General

1. Be prepared to work when you arrive at the laboratory. Familiarize yourself with the lab procedures before beginning the lab.
2. Perform only those lab activities assigned by your teacher. *Never* do anything in the laboratory that is not called for in the laboratory procedure or by your teacher. *Never* work alone in the lab. Do not engage in any horseplay.
3. Work areas should be kept clean and tidy at all times. Only lab manuals and notebooks should be brought to the work area. Other books, purses, brief cases, etc. should be left at your desk or placed in a designated storage area.
4. Clothing should be appropriate for working in the lab. Jackets, ties, and other loose garments should be removed. Open shoes should not be worn.
5. Long hair should be tied back or covered, especially in the vicinity of open flame.
6. Jewelry that might present a safety hazard, such as dangling necklaces, chains, medallions, or bracelets should not be worn in the lab.
7. Follow all instructions, both written and oral, carefully.
8. Safety goggles and lab aprons should be worn at all times.
9. Set up apparatus as described in the lab manual or by your teacher. *Never* use makeshift arrangements.
10. Always use the prescribed instrument (tongs, test tube holder, forceps, etc.) for handling apparatus or equipment.
11. Keep all combustible materials away from open flames.

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12. Never touch any substance in the lab unless specifically instructed to do so by your teacher.

13. Never put your face near the mouth of a container that is holding chemicals.

14. Never smell any chemicals unless instructed to do so by your teacher. When testing for odors, use a wafting motion to direct the odors to your nose.

15. Any activity involving poisonous vapors should be conducted in the fume hood.

16. Dispose of waste materials as instructed by your teacher.

17. Clean up all spills immediately.

18. Clean and wipe dry all work surfaces at the end of class. Wash your hands thoroughly.

19. Know the location of emergency equipment (first aid kit, fire extinguisher, fire shower, fire blanket, etc.) and how to use them.

20. Report all accidents to the teacher immediately.

Handling Chemicals

21. Read and double check labels on reagent bottles before removing any reagent. Take only as much reagent as you need.

22. Do not return unused reagent to stock bottles.

23. When transferring chemical reagents from one container to another, hold the containers out away from your body.

24. When mixing an acid and water, *always add the acid to the water.*

25. Avoid touching chemicals with your hands. If chemicals do come in contact with your hands, wash them immediately.

26. Notify your teacher if you have any medical problems that might relate to lab work, such as allergies or asthma.

27. If you will be working with chemicals in the lab, avoid wearing contact lenses. Change to glasses, if possible, or notify the teacher.

Handling Glassware

28. Glass tubing, especially long pieces, should be carried in a vertical position to minimize the likelihood of breakage and to avoid stabbing anyone.

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Safety in the Chemistry Laboratory (continued)

29. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Dispose of the glass as directed by your teacher.

30. Always lubricate glassware (tubing, thistle tubes, thermometers, etc.) with water or glycerine before attempting to insert it into a rubber stopper.

31. Never apply force when inserting or removing glassware from a stopper. Use a twisting motion. If a piece of glassware becomes "frozen" in a stopper, take it to your teacher.

32. Do not place hot glassware directly on the lab table. Always use an insulating pad of some sort.

33. Allow plenty of time for hot glass to cool before touching it. Hot glass can cause painful burns. (Remember: Hot glass *looks* cool.)

Heating Substances

34. Exercise extreme caution when using a gas burner. Keep your head and clothing away from the flame.

35. Always turn the burner off when it is not in use.

36. Do not bring any substance into contact with a flame unless instructed to do so.

37. Never heat anything without being instructed to do so.

38. Never look into a container that is being heated.

39. When heating a substance in a test tube, make sure that the mouth of the tube is not pointed at yourself or anyone else.

40. Never leave unattended anything that is being heated or is visibly reacting.

I have carefully read the discussion of good laboratory safety practices and the safety precautions listed above. I understand their importance in preserving the safety of all persons in the laboratory.

I recognize my responsibility to observe these practices and precautions while present in the laboratory.

Signature _____ Date _____

Course _____ Laboratory Section _____

Laboratory Locker Number _____ Room Number _____

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