

# CHEMICAL TECHNOLOGY SAFETY INSTRUCTIONS AND SAFETY TEST

## LABORATORY SAFETY

Laboratory work in chemistry can be stimulating to students who appreciate the challenge it offers to their abilities, but it is not without certain hazards. For your safety, and for that of your classmates, a few simple regulations will have to be enforced. The observance of these safety regulations is an integral part of good laboratory technique.

1. Wear safety glasses at all times in the laboratory. This includes clean up times and times when you yourself may not be working on an experiment, but someone else is.
2. Shoes must be worn in the laboratory. Sandals or bare feet are prohibited.
3. Shorts or cut-offs shall not be worn when working in the laboratory.
4. Light burners only when needed. Promptly extinguish any flame not being used. An open flame may ignite reagents being used by you or others near you.
5. Do not eat, drink, smoke, dip or chew tobacco in the laboratory.
6. Never look directly into the mouth of an open flask or test tube if it contains a reaction mixture.
7. Never point the open end of a test tube at yourself or at another person.
8. Avoid measuring volumes of strong acids or alkaline solutions with your graduated cylinder held at eye level. Support the graduated cylinder on your bench; add the hazardous liquids from a beaker a little at a time, inspecting after each addition.
9. Never weigh a chemical directly on a balance pan. Use a pre-weighed container, e.g. a watch glass, weighing dish or a small square of clean paper turned up on all sides.
10. Make sure all electrical equipment is safely grounded and all wires are insulated.
11. Report all accidents to your instructor.

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## SAFETY TEST

NAME OF STUDENT \_\_\_\_\_

ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_

IN CASE OF AN ACCIDENT NOTIFY \_\_\_\_\_

ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_

1. The best first aid when a chemical gets into the eyes is to  
 a) rub the eyes.  
 b) wash the eye with clear water.  
 c) put on safety glasses.  
 d) wear prescription glasses.
  
2. With proper precautions, any chemical can be handled safely.  
 a) true  
 b) false  
 c) no opinion
  
3. The best way to learn hazardous characteristics of a chemical is  
 a) read the label on the bottle.  
 b) ask your classmate.  
 c) refer to your textbook.  
 d) none of the above.
  
4. Safety glasses should be worn in the laboratory  
 a) only when working with acids.  
 b) only when working with bases.  
 c) all of the time.  
 d) only when heating a substance.
  
5. Horse play is permitted in the laboratory  
 a) when cooling a chemical.  
 b) when heating a chemical.  
 c) during an experiment.  
 d) never.

6. Accidents should be promptly reported to
- a) your partner.
  - b) your other classmates.
  - c) your instructor.
  - d) the school nurse.
7. Burners should be lighted
- a) only when needed.
  - b) all the time.
  - c) when cooling a chemical.
  - d) never.
8. One should use the contents of an unlabeled container.
- a) always
  - b) seldom
  - c) never
9. Foods, drinks, and smoking are permitted in a laboratory.
- a) never
  - b) always
  - c) once in a while
10. Which of the following are NOT required for a fire:
- a) oxygen
  - b) fuel
  - c) heat
  - d) carbon dioxide
11. Unauthorized experiments are NOT to be performed.
- a) true
  - b) false
  - c) no opinion

12. Which of the following is a hazardous nature of chemicals?
- a) toxic
  - b) flammable
  - c) irritating
  - d) explosive
  - e) all of the above
  - f) none of the above
13. Glassware that is chipped or cracked should be
- a) used right away.
  - b) discarded.
  - c) given to your partner.
14. The proper way to dilute acid is to
- a) add acid and water at the same time.
  - b) add acid to water.
  - c) add water to acid.
  - d) none of the above.
15. Standing on a laboratory stool is a safe practice.
- a) true
  - b) false
  - c) no opinion
16. When dangerous gases are given off in a reaction, the experiment should be carried out
- a) on your laboratory bench.
  - b) outdoors.
  - c) in a fume hood.
  - d) in the hallways.

17. It is a good practice to read the experiment and follow the instructions carefully.

- \_\_\_\_\_ a) true
- \_\_\_\_\_ b) false
- \_\_\_\_\_ c) no opinion

18. Excess reagents should be

- \_\_\_\_\_ a) placed in a waste container.
- \_\_\_\_\_ b) should be returned to the reagent bottle.
- \_\_\_\_\_ c) consumed by the student.

19. A chemical may enter the human body through the

- \_\_\_\_\_ a) mouth.
- \_\_\_\_\_ b) skin.
- \_\_\_\_\_ c) lungs.
- \_\_\_\_\_ d) all of the above.

20. Lids and stoppers should be replaced on the corresponding reagent.

- \_\_\_\_\_ a) true
- \_\_\_\_\_ b) false
- \_\_\_\_\_ c) no opinion

THIS IS TO CERTIFY THAT I have received instruction on laboratory safety and have witnessed a safety film. I certify that I understand the safety instructions and I am aware that safety glasses must be worn at all time in the laboratory.

SIGNED \_\_\_\_\_  
Student

SIGNED \_\_\_\_\_  
Student Witness

THIS IS TO CERTIFY THAT \_\_\_\_\_  
has been given safety instructions and has satisfactorily passed a safety test.

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
Instructor