Truman College: Department of Physical Science and Engineering

Student Safety Contract

Chemistry is an experimental science. Students in this course will be performing various laboratory activities that may require the use of hazardous chemicals. Truman College places a high priority on the safety of the students, faculty, and staff in its chemical laboratories. To ensure safe laboratories, a list of rules has been developed and provided to you in this safety contract. Your conduct must be guided by these rules at all times. You need to sign two copies before you can participate in the laboratory. One copy will be collected by your instructor for filing. Keep the second copy in your laboratory notebook as a constant reminder of these rules.

General Rules

1. Always be prepared by reading the procedure thoroughly before coming to the laboratory. Pay attention to the pre-laboratory discussion.

2. Follow all instructions carefully. Ask the instructor if you do not understand a direction or part of a procedure.

3. No student may work in the laboratory without an authorized supervisor present.

4. Do not touch any equipment, chemicals, or other materials in the laboratory area until instructed to do so.

5. Do not eat food, drink beverages, or chew gum in the laboratory.

6. Be familiar with the location and proper use of all safety equipment including the first aid kit, eyewash station, safety shower, fire extinguisher, and fire blanket. Know where the fire alarm and the exits are located.

7. Perform authorized experiments only.

8. Horseplay, practical jokes, and pranks are dangerous and prohibited.

9. Work areas should be kept clean and orderly. Bring only your laboratory manual and notebook to your lab station.

10. Keep aisles clear as much as possible.

11. Always work in a well-ventilated area. Use the fume hood when working with volatile substances or poisonous vapors. Never place your head into the fume hood.

12. Be alert and cautious at all times. Notify the instructor immediately if you observe any unsafe conditions.

13. Dispose of all chemical waste properly or as instructed. Never pour chemicals in sink drains. Only water and aqueous solutions designated by the instructor may be poured in the sink. Solid chemicals, metals, matches, filter paper, and all other insoluble materials are to be disposed of in the proper solid waste containers. Always double-check the label of all waste containers before disposing your chemical waste to the container.

14. Read the labels on reagent bottles carefully before use.

15. Read the equipment instructions carefully before use.

16. Keep hands away from any part of your body while using chemicals. Wash your hands with soap and water after performing all experiments.

17. Clean and wipe all work surfaces, equipment, and apparatus at the end of the experiment. All borrowed equipment must be returned on the cart.

18. Never leave an experimental setup unattended.

19. Keep out of the stockroom unless given permission by the instructor. The stockroom attendant will provide assistance.

20. If there is an emergency evacuation during the laboratory period, containers must be closed, gas valves turned off, and any electrical equipment turned off.

21. When using sharp instruments, always carry with tips and points pointing down and away. Always cut away from your body.

22. If you have a medical condition (e.g.,allergies, pregnancy, etc.), consult with your physician prior to working in lab.

Use of Personal Protective Equipment (PPE)

23. Use a laboratory coat, apron or other personal protective equipment when instructed to do so.

24. Whenever chemicals, heat, or glassware are used in the laboratory, you need to wear your safety goggles.

25. Do not wear contact lenses in the laboratory. The instructor may permit contact lenses for certain activities.

26. Wear appropriate clothing in the laboratory. Long hair must be tied back and dangling jewelry must be secured. Avoid loose clothing as they can be a hazard. Always wear closed footwear to protect your feet.

Handling Chemicals and Equipment

27. Do not touch, taste, or smell any chemicals unless instructed to do so. The proper technique for safely handling specific chemicals will be demonstrated by your instructor.

28. Double-check the label on reagent bottles carefully before removing any of the contents. Take only as much chemical as you need. The instructor will demonstrate the proper technique for transferring small quantities of chemicals.

29. Never return unused chemicals to their original containers.

30. Use a rubber bulb or pipet pump when you need to fill a pipet.

31. Always handle acids with extreme care. Your will be instructed on the proper method for diluting strong acids. Always add acid to water. Be cautious of the heat produced, particularly with highly concentrated acids.

32. Handle flammable hazardous liquids over a pan to contain spills. Never dispense flammable liquids anywhere near an open flame or source of heat.

33. Never bring reagent bottles and chemicals to your lab station. These must remain in the fume hood or the counter at all times.

34. Be extremely careful when transporting acids and other chemicals. Keep the containers secure and walk carefully.

35. Never touch any chemical that is spilled. Notify the instructor immediately.

36. If a chemical splashes in your eye(s) or on your skin, immediately flush with running water from the eyewash station or safety shower for at least 15 minutes. Notify the instructor immediately.

37. Carry glass tubing in a vertical position to prevent breakage and possible injury.

38. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken or waste glassware in the designated glass disposal container.

39. Inserting and removing glass tubing from rubber stoppers can be dangerous. Always lubricate glassware (tubing, thistle tubes, thermometers, etc.) before attempting to insert it in a stopper. Oftentimes, distilled water will do the trick. Always protect your hands with towels when inserting glass tubing into, or removing it from, a rubber stopper. If a piece of glassware becomes "frozen" in a stopper, ask for assistance.

40. Always make sure that you are using clean glassware. Double-check to make sure that there is no crack or chip.

41. Fill wash bottles only with distilled water.

42. Keep your hands dry when handling electrical equipment. When removing an electrical plug from its socket, grasp the plug, not the electrical cord.

43. Report damaged electrical equipment immediately. Do not attempt to use them.

44. If you do not understand the instructions for equipment use, ask for assistance.

45. Exercise extreme caution when using a gas burner. Take care that anything that can catch fire (e.g., hair, clothing, flammable chemicals, etc.) is kept at a safe distance at all times. Do not put any substance into the flame unless specifically instructed to do so. Never reach over a flame. The instructor will demonstrate how to light a burner.

46. Always turn the burner or hot plate off when not in use.

47. The instructor will demonstrate the proper method of heating and boiling liquids in test tubes. Make sure to point the open end of a test tube being heated away from anyone.

48. Heated metals and glass remain very hot for a long time. They should be set aside to cool and picked up with caution. Use tongs or heat-protective gloves if necessary. Do not set hot glassware in cold water or bench top; it may shatter.

49. Never look directly into a container that is being heated.

50. Do not place hot apparatus directly on the bench top. Always use an insulating pad. Allow plenty of time for hot apparatus to cool before touching it.

51. When bending glass, allow time for the glass to cool before further handling. Hot and cold glass has the same visual appearance. Determine if an object is hot by bringing the back of your hand close to it prior to grasping it.

52. Notify the instructor immediately in the event of an accident or injury, no matter how trivial it may appear.

53. If you or your lab partner are hurt, immediately get the instructor's attention.

Who Should We Contact In Case of an Emergency?

Name _____ **Telephone** _____

Relationship _____

Address _____

Do you have any allergies or medical conditions that you want us to share with us? This information will be available to the instructor and to the laboratory assistants.

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I have read and agree to abide by all the safety rules listed in this contract. I understand that I must obey these rules at all times to ensure my and that of my fellow students' and instructor's safety. I will cooperate to the fullest extent with my instructor and fellow students to maintain a safe lab environment. I will also carefully follow the oral and written instructions provided by the instructor. I am aware that any violation of this safety contract that results in unsafe conduct in the laboratory or misbehavior on my part, may result in being removed from the laboratory, receiving a failing grade, and/or dismissal from the course.

_____ _____

Student's Signature **Date**

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Student's Printed Name

Keep the rules to reference as needed and return this page to your instructor.