**Quality Control Program**

**Basic Lab Rules:**

1. Follow all written and verbal instructions carefully
2. Never work alone
3. Do not touch any equipment, chemicals, or other materials until instructed to do so
4. Do not eat food, drink beverages, or chew gum in the laboratory
5. NEVER do anything in the laboratory that is not called for in the laboratory procedures or by your instructor
6. Unauthorized experiments are prohibited
7. Read all procedures thoroughly
8. Never fool around in the laboratory
9. Work areas should be kept clean and tidy at all times
10. Know the locations and operating procedures of all safety equipment including the first aid kit, eyewash station, safety shower, fire extinguisher, and fire blanket.
11. Know where the fire alarm and exits are
12. Notify the instructor immediately of any unsafe conditions you observe
13. Dispose of **ALL** chemical waste properly
14. **NEVER** mix chemicals in the sink drains. Sinks are to be used only for water and those solutions designated by the instructor
15. Clean **ALL** work surfaces and apparatus at the end of the experiment.
16. Return all equipment clean and in working order to proper storage area
17. If you have a medical condition, notify the instructor before entering the lab
18. Do not wear long sleeves
19. If you have long hair, pull it up into a ponytail
20. Report any accidental spills
21. Do not touch, taste, or inhale any chemicals used in the laboratory
22. Never return used chemicals to their containers (**VERY**important)
23. Never remove chemicals or other materials from the laboratory area
24. When removing an electric plug from its socket, grasp the plug, not the electrical chord
25. Exercise extreme caution when using a hot plate or gas burner
26. Never leave a burner unattended
27. Use tongs or heat-protective gloves if necessary for moving hot glassware to cool
28. Never look into a container that is being heated
29. Do not place hot apparatus directly on laboratory desk
30. Ask a supervisor if you have any questions

I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have read and agreed to follow these safety rules.

Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_

**Sodium Hydroxide**

**Common names:** Lye, Caustic soda, Soda lye, Sodium hydrate

**Chemical formula:** NaOH

**Physical description:** colorless to white, odorless solid (flakes, beads, granular form)

**Exposure routes:**inhalation, ingestion, skin/or eye contact

**Target organs:** Eyes, skin, respiratory system

**Flammability:** Nonflammable

**NFPA Rating:** Health: 3; Flammability: 0; Instability: 1.

**Handling:** Wash hands thoroughly after handling. Do not allow water to get into the container because of violent reaction. Do not get in eyes, skin, or on clothing. Keep container tightly closed. Use only with adequate ventilation

**pH:** 14 (5% aq soln)

**Solubility:** Soluble

**Molecular Weight:** 40.00

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to avoid:** Moisture, contact with water, exposure to moist air or water, prolonged exposure to air

**Hazardous Decomposition Products:** Toxic fumes of sodium oxide

**OSHA:** None of these chemicals are considered highly hazardous by OSHA

**FDA:** These chemicals meet the FDA requirements for food use

I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have read and reviewed these details on the chemical substance Lye (NaOH).

Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_

**Cleanup Procedure Guidelines**

**Lye cleanup:**

1. Rinse any containers that held the lye with distilled water, in the designated sink (**NOT** the sink at your lab table)
2. Rinse your thermometer and glass stirring rod in the designated sink with distilled water (do **NOT** use the sink at your lab table)
3. Search lab area for any lye leftover. If you find some, dispose of it into the sink or other designated area assigned.
4. Make sure that the container of lye is tightly sealed (do this immediately after you use some for the experiment)
5. Remember to **NEVER** return used/contaminated lye to its original container (yes, this includes extra lye granules that you took out for your original measurement. Dispose of these in a waste container, not the original)
6. Don’t eat the lye during the lab **OR** after the lab during cleanup. If you do so, you may cause severe and permanent damage to your digestive tract (review “Hazards” section)

**Other Materials Used:**

1. Throw all paper towels in the trash can
2. Rinse any containers that were used in the lab with distilled water in the designated sink
3. Dispose of any chemicals used in the lab into the designated waste area
4. Set all glassware to dry

I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have read and agreed to follow these cleanup procedures.

Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_