

SOP: Chemical Storage, Labeling, and Handling Protocols

This SOP details **chemical storage, labeling, and handling protocols** to ensure safe and compliant management of hazardous substances. It covers proper storage conditions, accurate labeling requirements, handling procedures to minimize exposure and contamination, and emergency response measures in case of spills or accidents. The objective is to protect personnel, property, and the environment by maintaining strict adherence to chemical safety standards.

1. Scope and Applicability

This SOP applies to all personnel involved in the acquisition, storage, handling, and disposal of chemicals in the facility.

2. Responsibilities

- **Lab Supervisor:** Ensure compliance with SOP; provide training.
- **Personnel/Staff:** Follow procedures and report incidents.
- **Environmental Health & Safety (EHS):** Conduct periodic audits and update protocols as necessary.

3. Chemical Storage Protocol

- Store chemicals according to compatibility groups (e.g., acids, bases, flammables, oxidizers).
- Keep incompatible chemicals separated by physical distance or secondary containment.
- Store flammable substances in approved safety cabinets.
- Maintain storage areas at appropriate temperature, humidity, and ventilation levels as specified in SDS.
- Ensure chemicals are stored in labeled, tightly closed containers.
- Limit storage quantities to what is necessary for current operations.
- Do not store chemicals on benches, floors, or near exits.

4. Chemical Labeling Protocol

1. All containers, including secondary containers, must be clearly labeled with:
 - Chemical name (no abbreviations or formulas)
 - Hazard class (e.g., flammable, toxic, corrosive)
 - Date received/opened
 - Responsible person or department
2. Labeling must comply with GHS (Globally Harmonized System) and local regulations.
3. Do not use illegible or damaged labels; replace them immediately.

5. Chemical Handling Procedure

- Review the Safety Data Sheet (SDS) before handling any chemical.
- Wear appropriate Personal Protective Equipment (PPE) such as gloves, goggles, and lab coats.
- Do not eat, drink, or apply cosmetics in chemical areas.
- Use fume hoods or appropriate ventilation when handling volatile or hazardous chemicals.
- Measure and dispense chemicals carefully to minimize spills.
- Wash hands thoroughly after handling chemicals.
- Transport chemicals using secondary containment (e.g., chemical carriers).

6. Emergency Response

- In the event of a spill:
 - Alert personnel and evacuate area if necessary.
 - Use appropriate spill kit and PPE for cleanup.
 - Report spill to supervisor and EHS immediately.
- For exposure accidents:
 - Rinse affected area with water for at least 15 minutes.
 - Seek medical attention as necessary.
 - Complete incident report.
- Ensure emergency equipment (showers, eyewash stations, fire extinguishers) is accessible and functional.

7. Training and Documentation

- All personnel must complete chemical safety training before beginning work.
- Maintain records of inventory, training, inspections, and incident reports.
- Review and update SOP annually or as required.

8. References

- Safety Data Sheets (SDS) for all chemicals
- Globally Harmonized System (GHS) Guidelines
- Local, state, and federal safety regulations

9. Revision History

Version	Date	Description of Change	Approved By
1.0	2024-06-01	Initial creation	Lab Safety Committee

Strict adherence to this SOP is mandatory. Failure to comply may result in disciplinary action and jeopardize safety.