

FACT SHEET: Chemical Storage Room Safety Guidelines



Chemical Storage Rooms are shared designated spaces that laboratories use for bulk storage of chemicals. Proper storage and handling are important to reduce or eliminate risks associated with large volumes of chemicals in these areas. Lab staff should periodically conduct safety checks of their shelves and review their chemical inventory in accordance with the guidelines outlined below.

NEED TO KNOW:

1. Chemical containers should be stored based on their compatibility with other chemicals.
2. **ALWAYS** refer to Safety Data Sheets (SDS) of chemicals for specific hazard information and storage requirements.
2. This guide may not cover all possible scenarios. Contact OEHS at oehs@tulane.edu for additional risk assessment and to pick up old/damaged chemical containers.

GUIDELINES FOR SAFE CHEMICAL STORAGE:





Chemical containers must be in upright position, have good container integrity, and be undamaged. EHS can pick-up old/damaged chemicals via the [Chemical Waste Collection Form](#). Container problems include: 1.) Leaking; 2.) Lid integrity issues (degraded or broken top); 3.) Chemicals showing signs of degradation (crystallization, precipitation, discoloration).

Peroxide forming chemicals (PFCs): Allergens can be released into the air when dander or fur is shed from the animals, or during procedures that generate aerosols, (e.g., cage changing, cage dumping and washing). Containers of PFCs stored in chemical storage room must be labeled immediately with the "Date Received". If containers have not been opened within a year of "Date Received", arrange for waste disposal, or test the container to assess any peroxide formation.

- OEHS provides labels that can be affixed on PFC containers. For more information, see [Peroxide Forming Chemicals Fact Sheet](#).

CHEMICAL INCOMPATIBILITY:

Chemical containers must be appropriately segregated based on the hazard class of constituents. Please consult following table to understand chemical compatibility-based storage needs for common hazardous chemicals. Contact OEHS for additional risk assessment.

Flammable Liquids 	Corrosives: Acids* 	Corrosives: Bases* 	Oxidizers 
Do not store with oxidizers and corrosives.	Do not store with bases (pH>7) or flammables. Use plastic secondary trays/bins if storing in metal cabinets.	Do not store with acids (pH<7) or flammables.	Do not store with flammables.
Examples: Acetone, ethanol, methanol, isopropanol, hexanes.	Examples: Hydrochloric acid, sulfuric acid, acetic acid.	Examples: Sodium hydroxide, potassium hydroxide, ammonium hydroxide, bleach.	Examples: Hydrogen peroxide, nitric acid, perchloric acid.
Special considerations: Pyrophoric chemicals should be kept under inert conditions.	Special considerations: Oxidizing acids such as nitric acid and perchloric acid should be stored separately from other chemicals including other acids.	Special considerations: Bleach is incompatible with different chemical groups including acids, ammonia containing chemicals, hydrogen, peroxide, certain metals, and organic chemicals including solvents.	Special considerations: Oxidizing acids such as nitric acid and perchloric acid should be stored separately from other chemicals including other acids.

* Note that two chemicals (acids and bases) can have the same pictogram and still be incompatible!

MORE INFO:



SAFE TRANSPORT OF CHEMICALS:

To move chemicals between labs and storage rooms, OEHS staff must use secondary transportation containers.

- For single containers, OEHS has provided screw-top pails for transportation (located inside the chemical storage room).
- For moving multiple chemical containers, carts with raised edges must be used.

ADDITIONAL RESOURCES:

- EPA: [Incompatible Chemical Storage](#)
- ACS: [Chemical Storage](#)
- Capital Resin Corporation: [4 Chemical Storage Room Ventilation Requirements](#)