



This document provides guidance for chemical storage and has to be used in conjunction with specific storage conditions from the Safety Data Sheet.

Flammable cabinets Flammable approved refrigerators



Ex: diethyl zinc, sodium, lithium hydride



Ex: acetone, methanol, diethyl ether

Domestics fridges are not suited for flammables

General Storage

On benches, shelves, and in cabinets



Ex: Agar, common salts, buffer solutions

Common Incompatibles

Incompatible: Flammables and Oxidizers

Incompatible: Acids and Bases

Incompatible: Inorganic acids and Organic acids

Incompatible: Water reactives and Aqueous solutions/alcohols

General Process

1. Isolate highly reactive (i.e. pyrophorics, water reactives, and potentially explosive compounds), strong oxidizers and highly toxic or carcinogenic compounds.
2. If present (required for > 10 gallons of flammables), prioritize flammable cabinet and flammable approved refrigerator/freezer space by next storing flammable liquids.
3. Within the flammable cabinet or flammable approved refrigerator/freezer use secondary containers to store pyrophorics and to group different hazard classes (i.e. peroxide forming compounds, carcinogens, toxic compounds)
4. If present, prioritize corrosive cabinets to store acids and bases. Be sure to segregate inorganic acids from organic acids and all acids from bases with the use of compatible secondary containers. Isolate corrosives with additional hazards such as oxidizers, high degree of acute toxicity, and carcinogens.
5. If no corrosive cabinets are available store corrosives in secondary containment but as low as possible avoiding ground storage or underneath sinks. Maintain proper segregation of acids and bases.
6. The remaining chemicals should be stored where appropriate maintaining segregation of incompatibles.

Corrosive Cabinet



Ex: sodium hydroxide, Tetramethylammonium hydroxide, ammonia



Ex: hydrochloric acid, sulfuric acid, perchloric acid



Ex: Acetic acid, formic acid, *p*-toluenesulfonic acid

Nitric acid is also an OXIDIZER and has to be stored separately from other acids and organics chemicals.

Separate from other hazards



Ex: picric acid, organic azides, sodium amide



Ex: osmium tetroxide, cyanides, benzene, formaldehyde



Ex: nitrates, perchlorates, permanganates

- ✓ **Do use secondary containers to contain potential spills and segregate chemicals if lab space is limited**
- ✓ **Do date chemicals upon opening (required for peroxide forming chemicals)**
- ✓ **Do label all storage areas**
- ✓ **Do limit the amount of hazardous chemicals you purchase and store in your lab**
- ✓ **Do store volatile toxic and odoriferous chemicals in ventilated cabinets**

- ✗ **Do not store chemicals just by alphabetical order**
- ✗ **Do not store any chemicals under the sink**
- ✗ **Do not store hazardous liquids above eye level**
- ✗ **Do not store chemicals on the floor and do not stack chemicals**

