



Proper chemical segregation is part of basic laboratory safety. This prevents incompatible chemicals inadvertently mixing during a fire, explosion, earthquake, or any other type of incident.

Ideally, chemical families should be kept in separate cabinets, but most labs have limited space. Use secondary containment (such as plastic tubs) to segregate under these conditions.

Do's and Don'ts

1. Always consult the chemical's safety data sheet (SDS) for specific storage segregation.
2. Do not store your chemicals in alphabetical order, except within each hazard family.
3. Avoid storing chemicals on the floor.
4. If you do have to store chemicals on the floor, use secondary containment and ensure that containers are not in the walkways or aisles.
5. Install lips on the shelves to prevent bottles from falling off the shelf due to normal building vibrations and earthquakes.
6. Store your flammable liquids in flammable liquid cabinets.
7. Store only flammable or combustible liquids in a flammable liquid cabinet.
8. Some chemicals have multiple hazards. Consult the SDS for best method of segregation.
9. Be aware that acids are either organic, inorganic or oxidizing. Segregate organic acids like acetic acid from oxidizing acids like nitric acid.
10. The chemical fume hood is not designed for storage. Excessive items in a hood impedes air flow.
11. Keep oxidizing chemicals separate from most chemicals, especially flammable or combustible materials



Chemical Families for Segregation

These are general guidelines; always consult your SDS for specifics.

- Flammable and Combustible Liquids
 - Solvents
- Flammable Solids
 - Activated charcoal
- Oxidizing Materials
 - Sodium chromate, potassium permanganate
- Corrosive Materials – Acids
 - Hydrochloric acid, phosphoric acid
- Corrosive Materials – Bases
 - Ammonia, sodium hydroxide
- Water-Reactive Compounds
 - Sodium
- Pyrophoric Compounds
 - Phosphorus
- Highly toxic compounds or carcinogens
 - Arsenic compounds, nickel compounds, cyanides
- Relatively non-reactive chemicals
 - Potassium chloride, sodium phosphate, silica, magnesium sulfate