

- **Chemical Storage**



- Store in compatible containers that are in good condition with lids tightly closed.
- Make sure all containers are labeled with contents and are oriented so label is visible.
- Date chemicals such as peroxide formers or chemicals that degrade over time when received and when opened.
- Date and include researcher's initials on chemicals generated by research that will be stored in the lab.
- Store in groups based on compatibility.
- Where possible, use separate cabinets for separate groups. Note: Most fume hoods have a flammable cabinet and a vented corrosive cabinet under them.
- If incompatible materials must be stored in the same cabinet, provide secondary containment and segregation.
- Store acids in vented acid cabinets to reduce corrosion.
- Separate *oxidizing* acids (e.g. nitric acid) from *organic* acids (e.g. acetic acid) by use of secondary containers if there is insufficient space to store separately.

- Flammable liquid storage
 - Store bulk quantities in flammable storage cabinets
 - UL approved Flammable Storage Refrigerators are required for cold storage
- Provide secondary containment for floor storage.
- Do not store hazardous liquids above eye level.
- On shelves, separate solids from liquids and store solids above liquids.
- Do not store items in the working space of fume hoods. Minimize chemical storage in fume hoods.
- Do not store flammable, volatile toxic, or corrosive chemicals in cold rooms.

• Common Problems

- Oxidizing acids stored with organic acids, e.g. Nitric acid and acetic acid.
- Oxidizers stored with flammables.
- Acids stored with bases.
- Flammables stored in non-flammable refrigerator.
- Large quantities of flammables stored outside flammable cabinets.
- Corrosives (acids and bases) or other liquids stored above eye level.
- Stock chemicals stored in fume hood.
- Reactives stored with incompatible chemicals.
- Liquids stored with solids that are incompatible with liquids, e.g. cyanides.
- Anhydrides not stored with secondary containment.

- **General Rules for safe chemical storage**

- Keep chemical inventory to a minimum and do not maintain excess quantities of any hazardous chemicals.
- When ordering new materials, make sure you have the capability of storing those materials safely. Review an MSDS before ordering for information on storage.
- Separate all chemicals according to compatibility groups based on hazard class and storage scheme selected and store them in labeled storage areas or cabinets. Provide secondary containment, when necessary, for separation and safe storage of materials.
- Make sure chemical containers are in good condition and are compatible with contents. Keep chemical lids securely in place on stored materials. Dispose of degraded, spilled or leaking containers of hazardous chemicals as hazardous waste.