HARVARD
Campus Services
ENVIRONMENTAL HEALTH & SAFETY

Lab Chemical Storage Guide

This guide does not apply to the storage of hazardous waste, compressed gases, or DEA Controlled Substances.
Before using this guide, refer to the Chemical Storage Guide User Manual for detailed instructions and general chemical storage guidelines.

Start
Is the following Globally Harmonized System (GHS) Pictogram on the label?

Yes → Storage Group **Explosive or Unstable (EU)** → •**Contact EHS or Department Safety Officer.**

No ↓

Yes → Hazard Statement contains **"Catches fire spontaneously"** or **"In contact with water releases"**

- Yes → Storage Group **Pyrophorics and Water Reactives (PW)**
  - •Flammable storage refrigerator or freezer
  - •Inert gas glove box
  - •Dedicated cabinet away from other storage groups
  - → •Use only refrigerator or freezer designed for flammable materials storage.
  - •Store under inert atmosphere when indicated.
  - •Do not store with flammable liquids in flammable storage cabinet.
- No ↓

Hazard Statement contains **"Flammable liquid"** or **"Flammable aerosol"**

- Yes → Storage Group **Flammable Liquids (FL)**
  - •Flammable storage refrigerator or freezer
  - •Flammable storage cabinet
  - •Approved safety cans
  - → •Use refrigerator ot freezer designed for flammable materials storage.
  - •Do not store in cold rooms or warm rooms.
  - •Limited amounts of flammable liquids may be stored outside cabinets or safety cans.
  - •Place flammable organic acids in dedicated secondary containment bin.
  - •Venting a flammable storage cabinet is not recommended. Contact EHS before venting.
- No ↓

No ↓

Yes → Acid?

- Yes → Inorganic Acid?
  - Yes → Storage Group **Inorganic Acids (IA)**
    - •Standard refrigerator or freezer
    - •Corrosive/acid storage cabinet
    - •Standard wooden cabinet
    - → •Place hydrofluoric acid in dedicated secondary containment bin.
    - •Place perchloric acid in dedicated secondary containment bin. Do not store perchloric acid in same cabinet with organic chemicals including organic acids.
    - •Vent corrosive/acid storage cabinets, if feasible.
    - •Avoid placing in unvented metal cabinets unless designed for corrosive storage.
  - No → Storage Group **Organic Acids (OA)**
    - •Standard refrigerator or freezer
    - •Corrosive/acid storage cabinet
    - •Standard wooden cabinet
    - → •Do not store any organic acids in a storage cabinet containing perchloric acid.
    - •Vent corrosive/acid storage cabinets, if feasible.
    - •Avoid placing in unvented metal cabinets unless designed for corrosive/acid storage.
- No ↓

Inorganic Base?

- Yes → Storage Group **Inorganic Bases (IB)**
  - •Standard refrigerator or freezer
  - •Corrosive/acid storage cabinet
  - •Standard wooden cabinet
  - → •Use a secondary containment bin to separate from acids if stored in same cabinet.
  - •Vent corrosive/acid storage cabinets, if feasible.
- No ↓

No ↓

Yes → Hazard Statement contains **"May cause fire or explosion; strong oxidizer"** or **"May intensify fire, oxidizer"**

- Yes → Storage Group **Oxidizers (OX)**
  - •Standard refrigerator or freezer
  - •Corrosive/acid storage cabinet
  - •Standard wooden cabinet
  - → •Do not store in flammable storage refrigerator/freezer or flammable storage cabinet.
  - •Do not store on bare (uncoated) wood or other combustible material.
- No ↓

No ↓

Yes → Hazard Statement contains **"Fatal if swallowed"**, **"Fatal if inhaled"**, or **"Fatal in contact with skin"**

- Yes → Storage Group **High Acute Toxicity (AT)**
  - •Standard refrigerator or freezer
  - •Secure cabinet, if required for specific chemical
  - •Consider a vented cabinet for liquids with high volatility
  - → •Monitor container condition.
  - •Minimize storage in cold or warm rooms.
  - •May be stored with General Storage Group.
- No → Storage Group **General Storage (GS)**
  - •Standard refrigerator or freezer
  - •Any dedicated cabinet or shelf storage area away from other Storage Groups.
  - → •Separation of organic and inorganic chemicals is recommended.

No → Storage Group **General Storage (GS)**

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