



Laboratory Safety Walkthrough

Safety Equipment

- Identify locations of **safety showers**, **drench hoses**, and **eye wash stations** (flush eye washes weekly)
- Know where **fire extinguishers** are located and their uses
 - **Red A/B/C** extinguishers for wood, paper, oil, solvent, and electrical fires are in every bay
 - **Yellow D** extinguishers for metal fires are in the hallway of each floor
 - Keep **sand** on hand at your bench for extinguishing small fires (e.g., from reactions or reagent bottles)
- Know where the **emergency phones** and contacts are located in the case of accidents, large spills, fires, etc.
- **First aid kits** should be in every bay in a visible location (like glass cabinets by the office)
- When responding to a spill use **spill pads** (gray/yellow) for water and solvent (dispose in solid waste) or **spill kits** (e.g., acid neutralizer, NaHCO_3 (s), volatile solvent powder)
- **Calcium gluconate** gel (available in the stockroom) must be available when working with HF sources

Chemical Storage and Waste

- **Chemical and Flammable Cabinets**
 - Keep cabinets tightly closed and if there's a strong smell, let someone know
 - Store only chemicals that are compatible with one another in the same cabinet
 - **Corrosive** cabinets are located under each hood for acids, bases, or individual hazardous waste, separated into different cabinets
 - **Cyanides and azides** are segregated and their cabinets/drawers should be kept locked
- **Chemical Waste**
 - Designated **satellite waste accumulation areas (SAAs)** are rectangular bins and cabinets where full waste for removal should be kept
 - Large white **carboys** are for unreactive solvent waste (rotovaps or columns)
 - **4 L bottles** for general reaction and "sink waste" should be kept in a secondary container without signs of a spill
 - **Sharps waste** for needles, syringes, razors etc should be kept capped. Properly close and dispose when full; do not overfill
 - **Solid waste** drums are for silica, Celite®, drying agents, etc.; no metals
 - **Glass waste** boxes (for test tubes, pipets, silica plates, broken glass, etc.) need thick plastic liners

General Safety Advice

- Know your lab's safety officer and identify JST members who also care about lab safety.
- Consult with labmates before working with unfamiliar or dangerous reagents especially pyrophorics, HF, gas tanks, pressurized reactions, cyanides, and stills
- Never perform new, highly dangerous or large-scale reactions alone or during a severe storm
- Do not wear PPE in community spaces (e.g., offices, kitchens, bathrooms, instrument center, outside the building)
- Use masks when working with silica (columns, prep plates, cutting TLCs) or work exclusively in the hood
- Keep floors clear of debris, electrical cords and empty solvent bottles
- Always use a carrier to transport chemicals or reactions outside the lab and keep one hand ungloved while in hallways to touch door handles

Resources

- **EHS Website** <https://ehs.yale.edu>
 - Contact EHS after all serious injuries, fire extinguisher use, property damage, or large chemical spills
 - **emergency line: 203-785-3555** or call **911** on nights and weekends.
 - Find standard operating procedures for hazardous chemicals (**SOPs**)
 - Contacts, an SDS search engine, waste pickup and handling, controlled substrates lists, chemical hygiene plans, specific hazard training, respiratory protection, and more!
- **JST Website** <http://jst.chem.yale.edu/>
 - Near miss reporting feature (report accidents and search our archive)
 - Reaction safety sheets for your hood during scale up, overnight or hazardous reactions
 - Signs to block off an area where a spill has occurred
 - Safety posters, clean areas signs, fliers, newsletter archive, member contacts, and more!