

SAFETY and Hazardous Waste

Soft Matter Lab
Mechanical Engineering
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Basics for chemistry

If you do experiments and/or someone else in the lab does, you should:

- wear a labcoat
- wear safety goggles (especially for acidic or basic solutions)
- wear gloves

When you are in the lab, you should seriously avoid wearing

- shorts
- sandals/open shoes

-Never store or open a bottle close to a source of heat

-For organic solvents : check that they will not dissolve your gloves
(ex : Toluene)

Every vials in the lab has to be labeled with the name of the chemical, the date and the initials of the user.

Labelling Samples

Every sample /bottle/tube **must** be labelled with

- a definition of the sample (particle, solvent ...)
- date
- your initial
- you should also add if special care as to be taken for the sample

In case of exposure

If you are exposed to acidic or basic solutions or organic solvents:

STOP everything and rinse your body with water

Use the shower in the corridor

Use the eye shower



Chemistry : pay attention to what you do !

To make acidic solution: Always Add Acid to water.

1 water

2 acid

Don't mix acid with alcohol !

If you think you have: Stop the reaction immediately by adding at least 10 times the same volume of water.

You will see a color gas in most cases.

Do not cover the beaker, explosion could occur

Basic Laser-UV protection



If the laser is turned on

1. Do not enter the room
2. If you enter the room wear safety goggles
3. If you are not wearing goggles ask the user to turn off the laser or the lamp

In the lab you should pay attention to the laser for the tweezers and the UV Lamp.

Stock of chemicals

Avoid keeping large amounts of solvent on your bench
If you need solvent take only a small amount
and store the bottle in the stock part of the lab

In the stock cabinet:

Put the solvents that could react on different shelves.



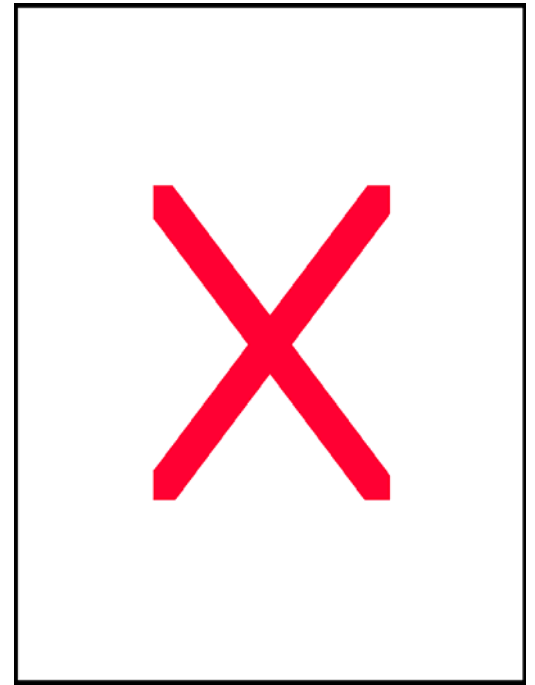
Waste

Broken or used glassware should go into the glass trash

Used “plastic-ware” should go into the plastic trash

Avoid keeping large waste volumes on your bench

Large volumes of waste solvent should be disposed of in the Satellite Accumulation Area



In the satellite accumulation area (SAA)

- The container **must always be closed**
- The container must be labeled with the words **”Hazardous Waste ”**
- The solution name has to be clearly indicated in English, not by the chemical formula
- Store containers by hazard compatibility; each of the following has its own container:
 - acid
 - base
 - organic solvents

No more than 55 gallons should be stored in the SAA.

Waste Removal

When a container is full:

Call ESS and ask them to remove the waste (785-3550).

Each container must be labeled with a tag.

The waste tag should contain:

- Your name
- Eric's name and phone number
- Total volume of all chemicals in the container
- List of the components, using full chemical names in English
- Percentage of total volume of each chemical component