

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The main title is centered in a large, bold, black sans-serif font.

SAFETY TOPIC: CHEMICAL FUME HOOD USE IN THE ESPOSITO LAB

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GUIDELINES FOR CHEMICAL FUME HOODS

Chemical Fume Hoods are the **FIRST** line of defense against exposure to hazardous chemicals

When should you use the fume hood?

- Handling **flammable liquids** (Acetone, MeOH, IPA, Toluene)
 - Related activities: glassware and electrode cleaning, transferring liquids to squirt bottles, sonicating solutions with flammable solvents
- When using or producing a large amount of **flammable or toxic gas** as part of an electrochemical reaction
 - e.g. HER, HOR, CO stripping, CO₂RR
- When operating electrochemical cells at elevated pressures – **physical hazard protection**
 - 3D printed and other fluid connections may leak or fail when pressurized (remember your delta P when pumping electrolyte)

GUIDELINES FOR CHEMICAL FUME HOODS

DOs and DO NOTs:

- Always wear goggles and gloves when working in the hood
- Keep chemicals and other objects at least 6" behind the sash opening
- The fume hood is NOT a chemical storage cabinet

2 Reasons to keep the hood sash closed:

1. Contains chemical reaction products within the hood
2. Conserves electricity (yay sustainability 😊)

properly. A safety officer or industrial hygienist should verify that the monitor is properly calibrated. Before using the fume hood, verify that the monitor is operating properly by testing the monitor.

4. The hood should not be operated with the sash in the full open position. When the hood is in use, the opening of the sash should be kept at a minimum. On a vertical rising panel sash glass should be no higher than 18". Horizontal sliding panel sashes must be closed when sash is raised vertically. The sash should remain closed when the hood is not in use.
5. Place chemicals and other work materials at least six (6) inches inside the sash.
6. Do not restrict air flow inside the hood. Do not put large items in front of the baffles. Large apparatus should be elevated on blocks. Remove all materials not needed for the immediate work. The hood must not be used for storage purposes.
7. Never place your head inside the hood.
8. External air movement can affect the performance of the hood. Do not operate near open doors, open windows or fans. Avoid rapid body movements. Do not open the hood if there are cross-drafts or turbulence in front of the hood. Do not open the sash rapidly.
9. If this hood is equipped with adjustable baffles, do not adjust the baffles without consulting the owner's industrial hygienist or safety representative.
10. Wear gloves and other protective clothing if contact with contaminants is a hazard.
11. Clean spills immediately.
12. If fumes or odors are present, stop operating the hood, close the sash and contact the owner's industrial hygienist or safety representative immediately.
13. It is recommended that this fume hood be tested and certified annually by the owner according to applicable industry and government standards. This hood was last tested on:

by _____

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WORKING HEIGHT 6

APPROVED FOR:

- Storage Only
- General Chemistry
- Radiosotopes
- Carcinogen or Toxic Chemical

FACE VELOCITY
88

Date of Inspection:
5/21

Inspected by:
AN

Expiration Date:
5/22

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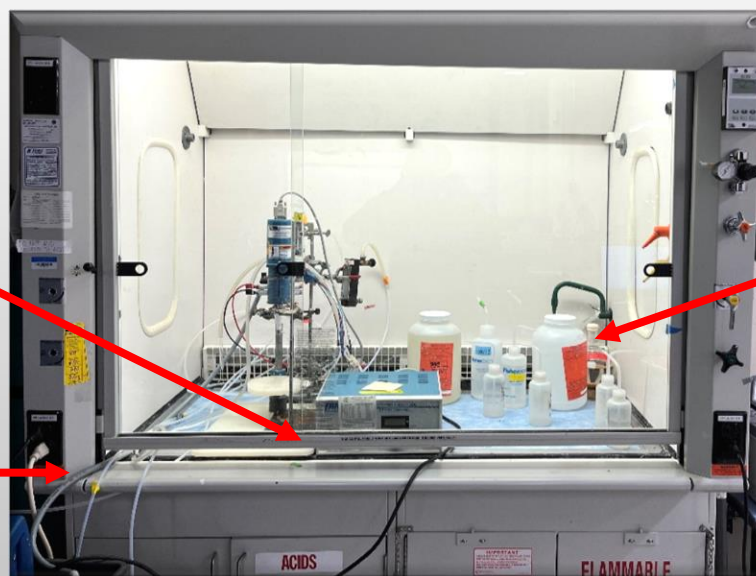
GUIDELINES FOR CHEMICAL FUME HOODS

What to do when the air flow alarm goes off:

- Close the sash to restore adequate air flow

Keep tubing and electrical cables out of the sash opening –

- There is a special secret door to feed these things through to keep them protected



Store unused chemicals in their proper storage cabinets

It is YOUR responsibility to read the SDS of the materials you will be handling to determine whether using a fume hood is required.