UC RIVERSIDE
Environmental Health & Safety

12 MONTHS OF RESEARCH SAFETY
AUGUST 2021
LAB SAFETY EQUIPMENT

Types of Lab Safety Equipment

There are many types of lab safety equipment (known as engineering controls) that have been designed to keep you safe. It is important to know what you are working with, what safety equipment are available, where they are, what they're used for, when to you use them, and how to use them.

- Locate nearest eye wash & shower station
- Know where the fire extinguisher is kept
- Review Emergency Poster
- Review each chemicals safety data sheet (SDS) and know what the hazards are


Chemical Fume Hood


Biosafety Cabinet (BSC)


Laminar Flow Cabinet

Choosing the Right Equipment/Engineering Control

What is it?	Chemical Fume Hoods	VS	Biosafety Cabinets (BSC)	VS	Laminar Flow Cabinet
What it is used for?	Used for **hazardous materials**		Used for **biological agents**		Used for **non-hazardous materials**
What does it protect?	Protects the user from fumes/vapors		Protects the user, materials, and environment from aerosols/particulates		Protects the materials only. Does not protect user or environment
HEPA filter?	No HEPA filter		HEPA filters to capture aerosols and particulates		HEPA filter to sterilize the air blown across cabinet toward user
Where does the air go?	Exhausts air outside the building		Recirculates air within room or exhausts air outside the building		Recirculates air within room by blowing it across cabinet toward user

CONTACT US

Phone: 951-827-5528
Email: ehslaboratory@ucr.edu
Website: https://ehs.ucr.edu/laboratory
Report an Incident, Injury or Safety Concern Here

Questions?

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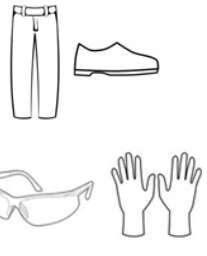
Wear your laboratory PPE:

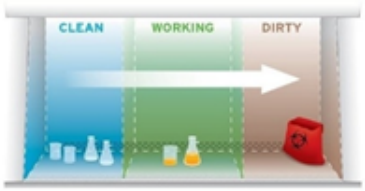
- ☐ full length pants (or equivalent)
- ☐ closed toe/heel shoes
- ☐ laboratory coats (or equivalent protective garments)
- ☐ protective eyewear
- ☐ gloves



Small spill clean-up

- ✓ Notify supervisor/PI/Instructor if a spill occurs
- ✓ Only use spill kit for small spills, **do not attempt to clean-up large spills**
- ✓ Clean the spill using good work practices and the proper spill kit and PPE
- ✓ Bag and tag the spill clean-up and notify EH&S to pick-up as hazardous waste

Follow the guidance below when working with a chemical fume food or biosafety cabinet (BSC).

Conduct a "pre-use" fume hood check:	Before using a BSC:
☐ Check the fume hood sticker and ensure it has been certified within the last year	☐ Check certification sticker and ensure it has been certified within the last year
☐ Check the air flow monitor & alarm. Make sure it's working and not alarming	☐ Turn on BSC, ensure sash is at operating height, and allow it to run for 10 minutes to purge the cabinet
☐ Check that the lights work	☐ Check for any alarms
☐ Ensure the fume hood is free from obstruction (i.e. bulky items, excess storage)	☐ Decontaminate cabinet with disinfectant and load materials you'll be working with into the cabinet
  	 
Safe techniques for working within the Fume Hood:	**Safe techniques while working in the BSC:**
☐ Open the sash to height noted on "sash sticker"	☐ Work with materials 4 inches inside the BSC
☐ Work with materials 6 inches inside the hood	
☐ Only your hands and arms can work within the hood, never your head/face	☐ Work in one direction across the cabinet to minimize cross contamination
☐ Cap containers that aren't being used	
☐ Work slowly and carefully	
Conduct a "post-use" fume hood check	**After using the BSC:**
☐ Lower the sash	☐ Remove unused materials from BSC
☐ Turn off the lights	
☐ Ensure chemicals left short-term are capped	☐ Decontaminate with appropriate disinfectant
☐ Don't store chemicals in the fume hood long-term	☐ Turn off BSC

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