Are you working with a biohazard (Virus, bacteria, fungi or other biohazard)?

Are you also working with a chemical hazard?

What is your lab’s BSL designation?

Is the chemical hazard a solid, liquid or gas?

Is it volatile?

Is it flammable?

What amount are you working with?

Do you also need a sterile environment?

Are you working with animals?

Chemical fume hoods offer personnel protection from chemical hazards only. Biological hazards should never be used in a chemical fume hood.

Consider modifying your protocol to isolate the gaseous hazard to a fume hood. If you use a biosafety cabinet, only bring into the cabinet the amount of flammable solvents or chemicals necessary to perform the task. Never store chemicals in a biosafety cabinet.

Open Bench

Are you working with animals?

Are you working with chemicals?

BSL 1, 2, 3

BSL 3*, 3+, 4

BSL 1, 2, 3

Solids can infiltrate the cabinet ducts and plenums. It is best to filter them immediately. Some solids can sublime (transform from a solid to a gas) easily. Consult MSDS sheets (or other literature) for chemical properties.

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Liquid

Gas

Flammable gases are particularly hazardous with recirculating cabinets. Concentrations could build to the lower explosive level (LEL).

Volatile liquids create gases which pass through HEPA filters.

Consider the effects of recirculated gases on the work being performed.

Consider modifying your protocol to isolate the gaseous hazard to a fume hood. If you use a biosafety cabinet, only bring into the cabinet the amount of flammable solvents or chemicals necessary to perform the task. Never store chemicals in a biosafety cabinet.

Trace amounts only

A B1 cabinet can be used when working with small amounts of volatile or flammable substances more frequently, or for trace amounts of more hazardous gases.

A2 - Animal Transfer Station

A2 - Canopy (60% Recirculated)

B1 (40% Recirculated)

B2 (100% Exhausted)

A B1 cabinet can be used when working with small amounts of volatile or flammable substances more frequently, or for trace amounts of more hazardous gases.

A2 - Canopy (60% Recirculated)

B1 (40% Recirculated)

B2 (100% Exhausted)

Chemical Fume Hood

Open Bench

Clean Bench

Animal Transfer Station / Clean Bench

Clean Bench animal transfer stations provide product protection and some personnel protection and aid in animal dander removal.