**Clean Bench** 

## **Biological Safety Cabinet Decision Map**

START HERE Are you working with a biohazard (Virus, bacteria, fungi or other biohazard)? Please Note - Prior to making a final decision, a risk assessment for the laboratory space should be prepared by, for example, the institution's Biological Safety Officer. YES NO Are you working with a chemical hazard Are you also working with a chemical hazard? with no biohazard? NO YES YES HEPA filters do not capture gases What level of Lab are you and vapors. When they are working in? used, the cabinet Do you also need product Is personnel protection needs to exhaust protection? required? to the outdoors. Biosafety cabinets can provide BSL 3\*, 3+, 4 product protection from particulates. BSL 1, 2, 3 Is the chemical hazard YES NO YES NO a solid, liquid or gas? \* Under special circumstances, see Biosafety in Microbiological Solid Liquid Gas and Biomedical Laboratories on the CDC Solids can infiltrate website. the cabinet ducts Is product Is there a biohazard? Flammable gases are particularly and plenums. It is Is it protection required? best to filter them hazardous with recirculating Is it volatile? flammable? cabinets. Concentrations could build immediately. to the lower explosive level (LEL). Some solids can NO YES NO YES sublime (transform from a solid to a YES NO NO YES With a positive gas) easily. Consult protection suit With NO human Chemical fume MSDS sheets (or hazard (chemical or hoods offer Volatile other literature) for biological), a clean liquids personnel What amount are you chemical properties. bench can provide protection from create product protection working with? chemical hazards gases from contaminants. which only. Biological Please note that A2 - Vent hazards should pass A2 - Vent to Class III the operator will be never be used in through to Room or **B1** Only bring into the exposed to all work Room Glovebox a chemical fume HEPA **Small** Large cabinet the amount of done in a clean Canopy hood. filters. flammable solvents or bench. chemicals necessary to Variables including Canopy exhaust There may be Consider the effects perform the task. Never future requirements such things as connection is of recirculated gases Chemical store chemicals in a Clean Open the severity of a required when on the work being for solvent, gas biosafety cabinet. Fume or volatile toxic biohazard, the using any amount performed. Bench **Bench** Hood chemicals use that amount being used, of toxic or and the possibility of flammable gases would require A2 - Canopy **B2** exhaust to the mass aerosolization and volatile solvents Clean bench (60% Recirculated) (40% Recirculated) (0% Recirculated) Animal outdoors. Also, may dictate the use (which create animal transfer of a Class III biological some researchers gases or vapors). **Transfer** stations provide Are you working with may prefer the safety cabinet. Class Since these gases Station / product III biological safety and vapors pass extra margin animals? protection and Clean Bench of safety that cabinets are a special through HEPA some personnel exhausting to the type of glovebox. filters, they need A2 - Animal protection and outdoors provides. Not all gloveboxes to be exhausted aid in animal Transfer Are you working with Vertical Flow are safe to use with to the outdoors. YES YES dander removal Station

animals?

biohazards.