

Safe Chemical Fume Hood Use Guide

A chemical fume hood is a type of local ventilation device that is designed to limit exposure to hazardous or toxic fumes, vapors, or dusts. When used in combination with prudent laboratory practices, the containment and capture of these hazardous substances, and the control of worker exposure should be adequate.

PERFORMANCE

Several factors contribute to the effectiveness of the fume hood:

STOP ALL WORK if fume hood is NOT functioning properly!

Hood Location

- Ensure the fume hood containment abilities are not adversely impacted by air cross currents.
- Avoid placement near open windows, doorways, high traffic areas, and other air ventilation systems (e.g. hood, BSC, etc.).

Close all doors and windows to the laboratory when fume hood is in use.

Face Velocity

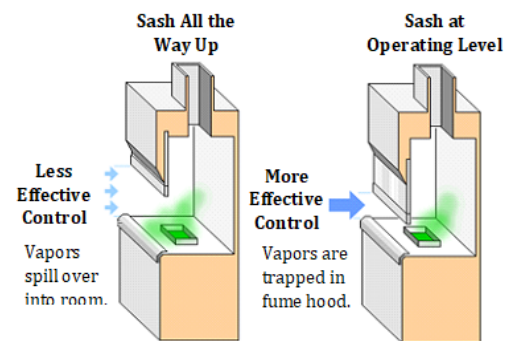
Ensures sufficient capture and containment of hazardous chemicals. Acceptable Face Velocity Range: 80-120 fpm

NEVER obstruct baffles at the back of the hood!

Flow Indicator Alarm

Flow indicator alarms alert users of improper exhaust flow. A visual or audible alarm should alert users when the exhaust flow is 20% less than the set point.

NEVER silence or deactivate the flow indicator alarm!



Cross Section of Chemical Fume Hood

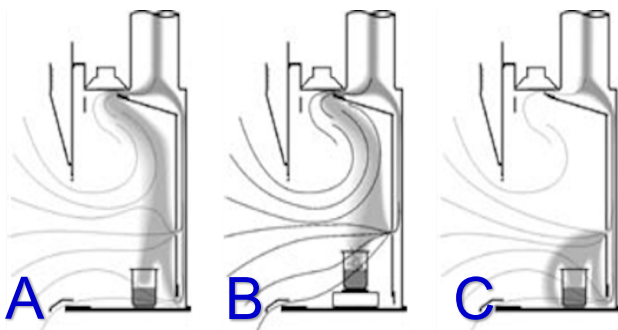
GENERAL WORK PRACTICES

Before beginning work in a chemical fume hood do the following:

- Verify fume hood was inspected within the last 12 months.
- Confirm the fume hood monitor is functioning properly. Check visual & audio components.
- Verify air flow. (*Tape a strip of tissue (Kimwipe) onto the sash to see if it moves with air current.*)
- Keep hoods free of clutter and avoid using them for storage.
- Avoid rapid arm or body movement.
- Work at least 6 inches inside the hood.
- Avoid raising the sash above the arrow/marking indicating the efficient operating level.
- Don't use the hood to evaporate unwanted solvents or spills. Clean up spills immediately!

BAFFLES

Help direct air flow inside the fume hood via air impedance.



Position A provides the best performance for most fume hood uses. Top and bottom baffles are open.

Position B gives the best containment when a large hot plate is used in the hood. Heat causes contaminants to rise. Narrow the lower baffle and enlarge the top baffle.

Position C is used for work involving heavy vapors, such as halogenated solvents. Large volumes of very dense vapors tend to sink within the hood. Narrow the top baffle and enlarge the bottom baffle.