THE UNIVERSITY OF CHICAGO | Office of Research Safety

Chemical Fume Hoods

The fume hood is the primary engineering control to protect workers when handling toxic and/or flammable chemicals.

Motion sensor
By detecting the presence of a user, it determines the standard/standby mode of the fume hood and adjusts the airflow velocity.

Fume hood control box

Face air velocity (feet per minute, fpm)
Safe range: 100-150 fpm (80 fpm for high-efficiency hoods)
If out of range, contact ORS or Lab Safety Specialist (LSS)

Fume hood mode dictated by motion sensor
Standard operation or standby operation

CAUTION – FLOW ALARM
If alarm is blinking: problem with the flow is detected and may compromise your protection, call ORS or LSS

EMERGENCY
Only use in case of emergency, such as a spill of a volatile chemical: closing the sash and pressing the button will induce higher airflow velocity.

Sash
Keep the sash height at or below the level of the certification sticker to ensure proper velocity and a physical barrier from splashes, flying objects, and fire. Closing the sash when not in operation saves energy and isolates the chemical hazard inside the fume hood.

Certification sticker
A sticker will be placed on the side of the fume hood to indicate that the face velocity at the height indicated on the sticker is at an acceptable velocity.
If the velocity is outside of the safe range, the fume hood will be tagged and should not be used until repair.

DO:

✓ **Verify the airflow velocity prior to working.**
Check the flow meter and/or face velocity on the control box, a *Kimwipe* can also be used to check that airflow is pulling into the hood.

✓**Keep chemicals and other supplies at least 6 inches (15 cm) behind the plane of the sash.**
To ensure proper airflow and that contaminants are not entering your breathing zone.

✓ **Work with the fume hood sash in the lowest possible position no higher than 18 inches.**

✓ **Close the sash when not in use or work is unattended.**

✓ **Turn on the light inside the fume hood when working.**

✓ **Immediately report any issue with your fume hood by calling ORS or your Lab Safety Specialist.**

DON'T:

× **Extend your head inside a fume hood for any reason.**

× **Accumulate chemicals or supplies in the fume hood.**

× **Dispose of chemicals by evaporating volatile liquid in the fume hood.**

× **Store any large pieces of equipment in the fume hood unless the fume hood is decertified i.e. not for handling chemicals.**

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× **Disable the airflow alarm and ignore it.**
Report malfunction to ORS or your Lab Safety Specialist.

× **Mistake fume hoods for biosafety cabinets or clean benches.**
Fume hoods may not provide the protection you need for infectious materials. Contact the Office of Biological Safety if you want to use infectious materials in a fume hood.

× **Attempt to modify any part of a fume hood without approval from ORS.**

Information provided by the Office of Research Safety. For questions, please email chemsafety@uchicago.edu