

Work Practices for Laboratory Chemical Hoods

Laboratory chemical hoods are designed to provide protection for the user from chemical and radiological contaminants which are used inside the hood. Use of Toxic and/or volatile chemicals should always occur in the chemical hood, NOT on an open bench. It should be noted that though chemical hoods are designed to protect the user from the hazardous substances being used, chemical hoods DO NOT absolutely eliminate exposure even under ideal conditions. Careless work practices can cause considerable exposure to a user who may believe s/he is protected. To optimize the performance of the chemical hood the following work practices must be adhered to:

- If the hood is not equipped with a velocity or pressure indicator ensure that your chemical hood has a current inspection sticker. Hood face velocity should be checked on an annual basis. The face velocity (which is written on the sticker) should be between 80 and 120 lineal feet per minute (fpm). Contact your departmental business representative if the face velocity is not within these limits. They can arrange to have the chemical hood exhaust system repaired.
- Verify that the chemical hood is drawing air by checking the chemical hood monitor, if there is a monitor, or by taping a "Kimwipe" to the sash and checking its position. If the draw does not seem sufficient check the chemical hood inspection sticker. If the sticker indicates that the hood maintained adequate flow when it was inspected, have the hood checked again by Zone Maintenance.
- If there is a chemical hood monitor which alarms during normal use, mute the alarm, (if possible) and contact Zone Maintenance to check the air flow or have your department business office arrange for repair to the monitor or hood exhaust system.
- Utilize the hood with the sash positioned at the arrow on the chemical hood inspection sticker indicating 100 fpm. This will ensure adequate face velocity and allow the sash to act as a protective shield. If this height is not appropriate for you, contact ORS to measure the face velocity when the sash is in your preferred position.
- Do not put your head in the hood when contaminants are being generated. (This sounds incredibly basic but is a common occurrence.)
- Perform all work and keep all apparatus at least six (6) inches into the hood.
- The chemical hood is NOT a storage cabinet! DO NOT store chemicals or apparatus in the hood. These stored materials can obstruct the air flow or exacerbate an incident or emergency in the hood.
- Do not block the slots in the hood baffle with containers or apparatus. If small amounts of chemicals or reagents must be stored in the hood, have shelves installed on the sidewall of the hood. If large equipment is used in the hood, place the equipment on blocks, legs or a low shelf, so that air can flow underneath the equipment to the bottom slot of the baffle.
- Electrical receptacles (including power strips) must be located outside of the chemical hood. Ensure that there are no sources of ignition or spark, including variable transformers (Variacs), when flammable liquids or gases are present.
- Do NOT use perchloric acid heated above ambient temperature in a chemical hood unless it is specifically designed for this use, e.g., it is equipped with a water wash down system.
- Keep chemical hood sashes closed down to about a six (6) inch opening when the hood is not in use. This will conserve energy in variable air volume systems and act as a shield in the event of an unexpected release.