

The general purpose of the laboratory fume hoods is to serve as the primary engineering control method for protection against the inhalation of hazardous vapors and gases. Operations and experiments that generate air contaminants above the exposure limit must be conducted inside a fume hood. When used correctly, a fume hood minimizes a user’s potential for exposure to airborne contaminants and prevents the contaminants from reaching the user’s breathing zone. A fume hood can also provide protection from unanticipated fires, explosions, and chemical splashes.

While the laboratory fume hood is a very effective engineering control, it does not provide absolute containment or protection. The laboratory fume hood and its associated features must be used correctly to enhance the protection and safety of the user. When using the fume hood, the acronym MOPS will help you remember the correct work practices and procedures:

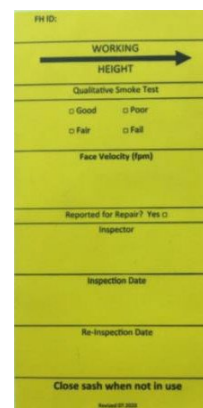
M-Monitor. Check the airflow monitor before commencing with the procedure to ensure that the fume hood is working correctly. The airflow monitor must indicate that the fume hood is in Normal **Standard** Operation mode. Laboratory fume hoods come with monitors or devices whose function is to provide the user of the hood with important information concerning airflow & face velocity. Monitors will alarm and alert the user when there is a problem with the airflow or face velocity. For a typical fume hood, the optimum face velocity is no less than 100 feet per minute (fpm). In the case of low-flow, high-efficiency fume hoods, the acceptable face velocity is no less than 80 fpm. (NOTE: Document all alarm events for low-flow, high- efficiency fume hoods. Include the date and time of occurrence, as well as the cause of the alarm event.)

O-Operational. Check the other fume hood components (sash, lights, baffles) to make sure that these items are operational. Do not remove the fume hood sashes or panels except when it is necessary to set-up apparatus; they must be replaced before any operations begin. All chemical hoods should have spill protection lips along the front of the hood. If your hood has a cup sink, it should have a lip as well.

P-Placement. Place apparatus a minimum of six inches back from the face of the hood. Do not store excessive amounts of chemicals or apparatus in the hood since these items can greatly impair fume hood performance. Fume hoods are not meant for long-term chemical storage. Do not obstruct the slots of the baffles along the back of the hood. No more than 25% of the bottom slot should be blocked. All large equipment should be elevated 1-2 inches above the working surface of the hood to reduce the amount of baffle blockage and to maintain the hood’s performance. If there is a chance of explosion or eruption, use an appropriate barricade or shield. Do not place your head inside the hood when contaminants are being generated.

S-Sash Height. Adjust the sash height to the working height or lower.

The working height is indicated by an arrow on the yellow/gold/green (see example to the right) certification decal affixed to the front side of the hood. When the sash is placed at the proper working height, it will also provide a barrier against unanticipated explosions, fires, spills, or splashes, and help conserve energy.



Additional PI or Supervisor Considerations

Airflow monitors directly measure the face velocity of the fume hood, making certain that fume hoods have adequate containment and ventilation. If the velocity drops below a set level, audible and visual alarms provide an indication of potentially unsafe conditions.

If a fume hood monitor continuously alarms (audible or visual), discontinue use, completely close the hood sash, and notify all lab occupant(s) of the condition. Do not tamper with or defeat the fume hood alarm. Tampering or defeating a safety device, such as a fume hood alarm, is illegal and is subject to the penalties imposed by local, state, and federal regulations. Examples of tampering include but are not limited to:

- covering the visible lights and emergency indicators.
- applying tape, toothpicks, or other methods that results in muting the alarm.
- disengaging the power supply to the alarm.
- any action that disables the functionality and purpose of the alarm.

Also, fume hoods must not be used if the airflow monitor indicates that the fume hood is in and remains in Standby Operation mode. This condition must be immediately reported for repair.

Fume hood repair requests are made by contacting the Facilities Management Service Desk. Notify the School / Building Facility / Building Manager of such action.

- Submit an FMR <https://service.fac.uci.edu/> or call the FM Service Desk 949-824-5444
- Depending on the repair action, the user may need to empty the fume hood of its contents, decontaminate the interior surfaces, and submit a Lab Equipment Clearance Form.

The fume hood shall not be used until deficiencies are corrected.

Contact **EHS at (949) 824-6200** or safety@uci.edu for general inquiries on fume hoods and fume hood use.