

LABORATORY FUME HOODS

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 in order to enhance the protection and safety of the user. When using the fume hood, the acronym **M O P S** will help you remember the correct work practices and procedures:

M—Monitor. Check the airflow monitor before commencing to ensure that the fume hood is working correctly. 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 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. 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 operating height or lower. The operating height is indicated by an arrow on the yellow/gold/green (see example to the right) decal affixed to the front side of the hood. When the sash is placed at the proper operating height, it will also provide a barrier against unanticipated explosions, fires, spills, or splashes, and conserve energy.

Report fume hood repair issues to Facilities Management immediately.

Remember to close the sash when not in use. It costs approximately \$3K a year to operate a fume hood due to the energy expended to move the vast volume of air. Closing the sash helps minimize the volume and therefore affect the operating cost of the fume hood.

WORKING → HEIGHT
Qualitative Smoke Test
<input type="checkbox"/> Good
<input type="checkbox"/> Fair
<input type="checkbox"/> Poor
<input type="checkbox"/> Fail
Face Velocity (fpm)
Reported for Repairs <input type="checkbox"/>
Inspector:
Inspection Date:
Re-inspection Due:
Close Sash when not in use.