

OVERVIEW OF FACT SHEET

The fume hood is often the primary control device for protecting laboratory workers when working with flammable and/or toxic chemicals. When used properly, it will protect the user from exposure to potentially harmful chemicals. The purpose of this fact sheet is to provide an overview of safe use practices. By following safe operating procedures for fume hoods, we can prevent the loss of people and property.



If you have any questions regarding the performance or safe work practices for your Fume Hood, please contact the [Environmental Health and Safety Office](#) at 704-687-1111. We are available to assist by conducting performance testing and training on safe laboratory practices. Please visit our website to review a comprehensive version of the University's [Chemical Hygiene Plan](#).

Laboratory Chemical Fume Hoods

What is the proper function of the fume hood?

To adequately protect the fume hood user, the linear face velocity of air into the hood should be between 80 and 100 feet per minute (fpm). Arrows on the side of the hood should indicate where the sash should be positioned to achieve the proper airflow. This sash height should be set between 8 and 16 inches from the bottom of the opening to protect the user and allow adequate room to work. A fume hood that isn't performing properly is often worse than no hood at all because the user is likely to have a false sense of security about its ability to provide protection.

How do we verify proper performance?

The Environmental Health and Safety Office evaluates the performance of fume hoods and works with Facilities Management to identify and correct problems that may arise. EHS marks each hood with a calibration sticker indicating the date of the performance test and indicating the sash height needed to obtain the desired flow.

Before using a fume hood:

- Make sure that you understand how the hood works.
- You should be trained to use it properly.
- Know the hazards of the chemical you are working with; refer to the chemical's Safety Data Sheet (SDS) if you are unsure.
- Ensure that the hood is on.
- Make sure that the sash is open to the proper operating level, which is usually indicated by arrows on the frame.
- Make sure that the air gauge (if provided) indicates that the air flow is within the required range.

Safe use of a fume hood:

- Eliminate clutter in the hood. Fume hoods are not meant for storage of chemicals or lab equipment. Keep combustibles, such as paper towels, out of the hood.
- Never allow your head to enter the plane of the hood opening.
- Use appropriate eye protection and Personal Protective Equipment (PPE).
- Be sure that nothing blocks the airflow through the baffles or through the baffle exhaust slots.
- Elevate large equipment (e.g., a centrifuge) at least two inches off the base of the hood interior.
- Keep all materials inside the hood at least six inches from the sash opening. When not working in the hood, close the sash.
- Do not permanently store any chemicals inside the hood.
- When using extremely hazardous chemicals, understand your laboratory's action plan in case an emergency, such as a power failure, occurs.
- Minimize traffic near the hood, especially when conducting hazardous work.
- Chemical fume hoods should never be used as a means of evaporating old or unwanted chemicals. Submit all waste disposal requests to the EHS Office.
- Keep the sash closed unless you are setting up or actively using the hood.

Promptly report any hood that is not functioning properly to your supervisor. Any hood that is not functioning properly should be removed from service and posted as such until hood can be evaluated /repaired and air flow verified by EHS.

GROUP DISCUSSION TOPICS:

- Has anyone been trained on how to use a fume hood?
- What types of fume hoods are used at UNC Charlotte?
- What is the difference between a fume hood and a biological safety cabinet (BSC)?