

Guidance for Safe Cleaning of Chemical Fume Hoods

Your Chemical Fume Hood (CFH) is an important component of laboratory safety, as it protects users from exposure to harmful chemical vapors, fumes, and particulates. If not properly maintained, these hoods can become contaminated with chemicals, dusts, and other substances, which may compromise their effectiveness in protecting users. Regular periodic cleaning after use is essential to maintaining a safe work environment.

Steps involved in the regular cleaning of a CFH:

Step 1. Identifying appropriate cleaning supplies.

The type of cleaning product that can be used depends on the type of chemicals used within the CFH. Fume hoods used for perchloric acid and highly hazardous chemicals like PHS (particularly hazardous chemicals) require specialized cleaning. Most other fume hoods should be wiped down regularly with mild soap and water. Regular glass cleaner can be used for cleaning the sash. ***Use of strong chemical cleaners, chlorine-based solutions or bleach must be avoided.***

Step 2: Donning appropriate Personal Protective Equipment (PPE).

Minimum PPE requirement include nitrile gloves, safety goggles, and a buttoned lab coat. Additional PPE like N95 respirator may be required depending upon the condition of the fume hood and type of chemicals used. Never try to clean CFH that was used for work involving perchloric acid. Contact DOHS at (301) 496-3457 for consultations.

Step 3: Getting the CFH ready for cleaning.

Safely remove all equipment and chemicals from the fume hood and secure them by following the NIH chemical segregation guidelines (<https://ors.od.nih.gov/sr/dohs/Documents/chemical-segregation-table.pdf>). If the fume hood contains chemical waste, dispose of it by contacting DEP at (301) 496-4710. ***Using your CFH for the storage of chemicals and chemical waste is not an approved practice.***

Step 4: Cleaning procedure

- Wipe down inside surfaces starting from the top going down with mild soap solution. Make sure all work surfaces, including baffles and light fixtures, are cleaned. Use a soft cloth or sponge to avoid scratching.
- Wipe down the exterior surface of the fume hood with a wet cloth to remove any accumulated dust. Then wipe it down with mild soap solution.
- Sash can be cleaned with any regular glass cleaner.
- Finally, wipe all areas with water to remove any residue of soap or glass cleaner.
- Dispose of all cleaning supplies (cloths, wipes etc.) and any contaminated items as chemical waste. You may find additional information by viewing the [NIH Waste Disposal Guidelines](#) or by calling: (301) 496-4710.

Additional Safety Information:

- Clean up any spills inside the fume hood immediately by following your lab-specific spill response plan. Fume hoods are capable of exhausting airborne contaminants, chemical fumes/vapors, but not liquid/powder spills. **Spills must be cleaned up immediately.**
- Routine maintenance and annual inspection of your fume hood is very important to ensure performance. Schedule annual fume hood certifications using the following [Service Request](#) link.

- All lab personnel using the fume hood must be trained on its proper use, cleaning, and maintenance. It is the responsibility of the PI/Supervisor to train everyone in their lab. DOHS can help in developing appropriate training.

Working Safely in a CFH:

Before starting the work:

- Make sure the CFH is drawing air inward. If your fume hood is equipped with airflow indicator, check, and ensure that it is drawing air. If an airflow monitor is not installed, test the hood airflow with a piece of light material, such as tissue held to the bottom of the sash.
- Use appropriate PPE such as splash goggles, gloves, and lab coat.
- Check the baffles for obstructions. Place a shallow shelf at the back of the hood to hold supplies. This would help to ensure proper airflow. When using large apparatus inside the hood, place the equipment on blocks, when safe and practical, to allow air flow beneath it.

While working in a CFH:

- Keep your face outside the plane of the fume hood. Work at least 6 inches back from the face of the CFH. A stripe on the bench surface is a good reminder.
- Do not make quick motions into or out of the fume hood, use fans, or walk quickly by the fume hood opening. These will cause airflow disturbances which reduces the effectiveness of the CFH.
- Keep the sash at the right height as indicated on the green DOHS certification sticker.
- If CFH performance is disrupted, or an airflow alarm is triggered (if installed), terminate its usage and close the sash completely.

Note: *Biological Safety Cabinets are not suitable for work involving hazardous chemicals.*