

Facilities Management
Laboratory Fume Hoods Standard Operating Procedures

SOP #:	EHS-006	Revision: 1
Dept:	Environmental Health and Safety	Date: 03/11/19
Approval:		Date: 03/11/19

1. PURPOSE

Colorado State University-Pueblo is actively concerned with the safety of all faculty, staff, students and guests on the CSU-Pueblo campus. Safety can only be effectively achieved with the cooperation of the entire campus community. The combined use of safety glasses, protective gloves, lab coats, good safety practices, and laboratory fume hoods are very important in protecting us from a potentially hazardous exposure.

Laboratory fume hoods only protect users when they are used properly and are working correctly. A fume hood is designed to protect the user and room occupants from exposure to vapors, toxic materials, and other harmful substances. A fume hood is a piece of safety equipment that can be misused to the extent that they can be less effective than expected. Injury from misuse can arise from two causes:

1. From the fume hood not providing adequate flow rates for the work required (i.e. sashed being left open or from excess clutter that reduces the containment of noxious substances).
2. From the hood itself (i.e. if the fan belts are slipping, the exhaust duct has blockage due to paper towels being sucked into the duct, the duct damper is restricted).

Always realize the most likely person to be injured is the hood user. Escaping noxious material into the laboratory can also effect all laboratory occupants.

2. RESPONSIBILITIES

2.A. Environmental Health and Safety (EHS) will be responsible for:

2.A.1. Establishing a training program for both existing employees and new hires regarding Laboratory Fume Hood procedures.

2.A.2. Coordinating fume hood inspections and repairs with the Facilities Department and/or outside contractors.

2.B. Facilities Department staff will be responsible for:

2.B.1. Annual inspection of Laboratory Fume Hoods.

2.B.2. Laboratory Fume Hoods repairs.

2.C. All Laboratory Fume Hood Users will be responsible for:

2.B.1. Using Lab Fume Hoods properly as required.

2.B.2. Notify the Facilities Department via work orders of any Lab Fume Hoods not working properly.

2.B.3. Notify EHS of any potential health hazards due to Lab Fume Hood malfunctions.

3. DEFINITIONS

3.A. LAB FUME HOOD USER – A person who utilizes the fume hood for any function, such as laboratory coursework and research.

3.B. OPERATING STANDARDS – The draw from a hood in good working repair should be between 80 to 120 FPM.

4. PROCEDURES

4.A. The draw from a hood in good working repair should be between 80 to 120 FPM. Hoods operating between 60 to 79 FPM need service to increase air flow. Hoods with air flow in excess of 120 FPM should be serviced to reduce air flow. Hoods that have an airflow of less than 60 FPM must not be used and must be taken out of service. Never use a hood that has been tagged "Out of Service."

- 4.B. For maintenance of fume hoods, a work order should be submitted to the Facilities Department describing which hood and any problems that have been noticed.
- 4.C. Keep the hood clear of clutter and unused materials. Do not use a hood for long term storage. Storage reduces air flow and compromises hood capture efficiency.
- 4.D. All work should be done at least six inches from the front of the hood.
- 4.E. When large equipment is used, place on blocks to allow for a two inch air flow gap under the equipment.
- 4.F. Always lower the sash when not working in the hood.
- 4.G. Never place your head in the hood while an experiment is ongoing.
- 4.H. Avoid quick movements while working or passing in front of the hood. Rapid movements may cause turbulence or a backwash resulting in hazardous vapor escape.