



Department of Public Safety & Environmental Health

Subject: Laboratory Fume Hoods

Date: August 10, 2006

Revision: 01

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SUMMARY: Employees using laboratory fume hoods shall observe all applicable standards and guidelines to minimize exposure of chemicals.

SCOPE: This Guideline applies to personnel using laboratory fume hoods.

REFERENCE

REGULATIONS: Occupational Exposure to Toxic Substances in Laboratories ([29 CFR 1910.1450](#))

RESPONSIBILITY: Public Safety & Environmental Health

Review and revise the Laboratory Fume Hoods Guidelines.

Provide technical assistance.

Conduct annual certification of all laboratory fume hoods.

Employees

Comply with this Guideline and any further safety recommendations initialized by the principal investigator/superior.

Conduct their assigned tasks in a safe manner, wear appropriate personal protective equipment, and only use equipment for which they have been formally trained.

Principle Investigators/Supervisors

Implement procedures in accordance with this Guideline.

Assure that staff are aware of this Guideline, instructed on the details of implementation, and provided with equipment and controls. Maintain documentation as required.

Provide training to laboratory fume hood users.

PROCEDURES: Training

All personnel using laboratory fume hoods should be fully trained in their proper operation. This includes knowledge of the controller operation,



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monitoring devices, and designed sash height to allow for the generic airflow rate (face velocity) of 85-110 linear feet per minute (lfm) at the sash. Training shall be provided by the principle investigator or supervisor.

Proper Use of Fume Hood Sash

Labels and arrows are placed on the face of the fume hood by Public Safety & Environmental Health. These indicate a measured face velocity of 85-110 fpm at a specific sash height. Work in the fume hood should not be conducted with a sash height any higher than that marked by the sticker and arrow.

Whenever possible, lower the sash to the lowest position when working in the hood to provide a safety shield for the face and upper body. Avoid placing one's head in the hood.

Close the sash fully when the hood is not in use (for energy conservation).

Proper Use of Fume Hood

All experimental materials and equipment should be placed at least six inches back from the face. For proper air circulation, keep rear baffle openings clear. Large objects should be placed two to three inches above the work surface to insure proper air flow.

Keep nearby windows and doors shut and pedestrian traffic to a minimum, when working in the hood. While performing any ongoing procedures or reactive experiments, monitor as appropriate.

Laboratory fume hoods are not to be used as permanent storage for chemicals or equipment. Chemical containers should be covered when not in use, and should be properly labeled as to the contents.

No other types of exhaust can be connected to the hood exhaust system without proper engineering consultation from Facilities Management or Facilities Planning. For additional information contact the Facilities Management Department.



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Clean the interior and exterior surfaces and the sash with deionized water and then a soap solution. This will help prevent the surfaces from being damaged.

Keep papers, paper towels, work surface diapers, vials, or any other small objects from being drawn into the hoods ventilation system.

Alarms or Monitors

Laboratory fume hood alarms or monitors should never be turned off. If the alarm sounds or the monitor lights indicate low flow, work should be stopped, equipment turned off, and the sash lowered. Lab personnel should leave the area if highly toxic or volatile chemicals are being used. If the hood is not functioning, call Facilities Management.

Manual Controllers

Laboratory fume hoods with manual controllers should be set to minimum and the sash closed when not in use. Be sure to turn the controller to maximum or the 100 fpm position before using the hood.

Radioactive Materials

Use of radioactive materials must be authorized by OSEH-Ann Arbor.

RELATED DOCUMENT:

ANSI/AIHA Z9.5-1992

ANSI/ASHRAE 110-1985

UM Fume Hood and Laboratory Ventilation Standards

UM Biological Safety Cabinet/Fume Hood Helpful Hints pamphlet

TECHNICAL SUPPORT:

All laboratory fume hoods are certified annually by the Environmental Health & Safety (EHS) Manager. The certification includes air flow velocity measurements and designation of appropriate sash height. Contact EHS at 3-4914 if there are any questions regarding laboratory fume hoods.