



EAST TENNESSEE STATE
U N I V E R S I T Y

Laboratory Chemical Fume Hoods

Policy Name: Laboratory Chemical Fume Hoods

Policy Purpose

This policy specifies the safe use, service, and maintenance of Laboratory Chemical Fume Hoods (fume hoods) at East Tennessee State University (ETSU or University).

Applicability

This policy applies to all ETSU employees, students, visitors, and third-party.

Responsible Official, Office, and Interpretation

The Director of Environmental Health and Safety is responsible for the review and revision of this policy. For questions about this policy, please contact the ETSU Office of Environmental Health and Safety. The Associate Vice President of Facilities Management, in consultation with the Office of University Counsel, has the final authority to interpret this policy.

Defined Terms

A defined term has a specific meaning within the context of this policy.

Laboratory Chemical Fume Hood

The Laboratory Chemical Fume Hood is the most common local exhaust ventilation system used in laboratories and is the primary method used to control inhalation exposures to hazardous substances. When used properly, fume hoods offer a significant degree of protection for the user.

Face Velocity

Average air velocity into the exhaust system (i.e. fume hood) measured at the opening into the hood or booth.

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Properly operating and correctly used fume hoods are typically the best method of protection when working with hazardous substances in the laboratory. Fume hoods must always be used when working with hazardous substances. The Office of Environmental Health and Safety (EHS) will conduct fume hood performance testing annually and after any repair or modification. This policy applies to all fume hoods owned by ETSU and used to control hazardous substances in the laboratory.

Roles and Responsibilities

1. The Office of Environmental Health and Safety (EHS) will:
 - 1.1. Conduct annual fume hood testing.
 - 1.2. Assist in interpretation of and compliance with this policy.
 - 1.3. Maintain required records.
 - 1.4. Provide [chemical fume hood usage and safety training upon request](#).
 - 1.5. Provide fume hood servicing and repair upon request.
2. Facilities Supervisors will:
 - 2.1. Inform the designated laboratory supervisor or department chair of the time and duration of any service-required fume hood shutdown.
 - 2.2. Assure that maintenance work occasioning the shut-down of the system is coordinated with the laboratory or department. It entails the installing of dummy cameras that do not operate on a regular basis.
 - 2.3. Assure that ETSU employees assigned to work on chemical fume hood exhaust systems adhere to this policy and procedure and utilize the appropriate personal protective equipment.
 - 2.4. Assure that facilities maintenance employees do not remove, alter, or move laboratory chemicals or equipment.
3. Departments with chemical fume hoods will.
 - 3.1. Consult with EHS when specific questions arise related to this policy.
 - 3.2. Ensure laboratory staff and students are [properly trained to use chemical fume hoods](#).

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- 3.3. Assure that hazardous materials are secured when work is scheduled on laboratory ventilation systems.
- 3.4. Assure that facilities maintenance employees are provided with sufficient working space (clear of laboratory chemicals and equipment), when servicing and/or inspecting fume hoods.
- 3.5. Assure that all items, including laboratory chemicals and equipment, are removed from the laboratory fume hood before facilities maintenance employees begin servicing and/or inspecting the fume hood.

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Procedures

Contact EHS at 423-439-6029 to service a fume hood or if you have questions regarding proper fume hood use or training.

1. ETSU Facilities Management maintenance personnel will conduct ETSU fume hood testing in accordance with ASHRAE Standard 110-2016 (or most recent edition), Method of Testing Performance of Laboratory Fume Hood consensus standard.
 - 1.1. All non-radiological chemical fume hoods must have an average Face Velocity of 90 feet per minute (fpm) for high velocity hoods and 60 fpm for low velocity hoods.
 - 1.2. If a laboratory or laboratory storage room is posted with a radioactive materials sign, Facilities Management maintenance personnel must contact ETSU's Radiation Safety Office (RSO) at 439-7785 before working on the corresponding chemical hood exhaust system.
 - 1.3. All radiological chemical fume hoods must have an average Face Velocity of 100 fpm or greater for high velocity hoods and 80 fpm for low velocity hoods.
 - 1.4. At a minimum, Facilities Management maintenance personnel are required to wear chemical resistant gloves and eyewear protection when working on fume hoods.
 - 1.5. After completing maintenance tasks, maintenance personnel must wash the outside of re-useable protective gloves or properly dispose of single-use protective gloves.
 - 1.6. Hands must be thoroughly washed after completing all maintenance tasks.
 - 1.7. **NOTE:** Facilities Management maintenance personnel may be required to wear additional personal protective equipment (e.g., dust mask, ear plugs, hard hat, respirator, coveralls, etc.) when warranted.

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Applicable Forms and Websites

- [Safe work practices for using ETSU Laboratory Chemical Fume Hoods \(OSHA standard\).](#)
- [Chemical fume hood usage and safety training](#)

Authority and Revisions

Authority: T.C.A. § 49-8-203, et. Seq., Laboratory safety guidelines, 29 CFR 1910.1450, Occupational Exposures to Hazardous Chemicals and Laboratories. ANSI/ASHRAE 110-2016, *Method of Testing Performance of Laboratory Fume Hoods*, [Tennessee Occupational Safety and Health Administration](#) (TOSHA)

Previous Policy: Chemical Fume Hood Policy 700.20

The ETSU Board of Trustees is charged with policy making pursuant to TCA § 49-8-203, et seq. On March 24, 2017, the Board delegated its authority to ETSU's President to establish certain policies and procedures for educational program and other operations of the University, including this policy. The delegation of authority and required process for revision to this policy can be found on the [Policy Development and Rule Making Policy webpage](#).

To suggest a revision to this policy, please contact the responsible official indicated in this policy. Before a substantive change to the policy section may take effect, the requested changes must be: (1) approved by the responsible office; (2) reviewed by the Office of University Counsel for legal sufficiency; (3) posted for public comment; (4) approved by either Academic Council or University Council; and (5) approved by ETSU's President.