

**PRAIRIE VIEW A&M UNIVERSITY
ADMINISTRATIVE PROCEDURES**

24.01.01.P0.03 Lab Hood Inspection

Approved (April 8, 2010)

Next Scheduled Review (April 2011)

1. PURPOSE

- 1.1 Fume hoods are critical to the safety of researchers, faculty, and students, as they provide the primary means of preventing exposure to airborne hazardous materials on campus. Therefore, it is extremely important that the hoods be maintained in good working order.

The laboratory manager or Department Head, with review and approval of selection by EHS, will select a certified company to annually inspect the hoods in accordance with the requirements of American National Standards Institute/American Industrial Hygiene Institute (ANSI/AIHA) code Z9.5-2003 "Laboratory Ventilation," and this University Administrative Procedure.

If you suspect a problem with your hood or the inspection sticker is expired (over a year from the current date), call EHS at 1745/1746/1743 or email: EHS@PVAMU.EDU.

2. PROCEDURES - INSPECTIONS

- 2.1 Per ANSI/AIHA Z9.5-2003 guidelines, the following items are inspected on each hood by the certifying company. A report of the conditions noted will be furnished by the inspection company to each lab manager, the Department Head, the Dean of the College, Environmental Health & Safety and the Vice President.
- 2.1.1 BODY - The exterior and interior body/frame is examined for damage(s) that could impact safe operation.
- 2.1.2 SASH - The sash is examined for damage (glass breakage, sticking, etc.). Hoods requiring multiple vertical sashes are observed to determine if an adequate number of sashes are in place (usually a minimum of 3). If present, the sash alarm is tested.
- 2.1.3 BENCH-TOP - The hood bench-top should not be used for routine storage of hazardous materials if it is being used as a protective working surface. If a hood must be used for routine storage, it should be labeled appropriately and NOT be used as a protective working surface. Equipment and/or other materials on the bench-top should not block air flow into the hood.
- 2.1.4 LIGHT - The hood light must be working.
- 2.1.5 ID NUMBER(s) - Exhaust fan and/or equipment ID numbers are observed and recorded.

2.1.6 FACE VELOCITY - Face velocity is tested with a calibrated flow meter to insure that it meets minimum face velocity requirements as follows.

2.1.6.1 Hood face velocity measurements are taken with the sash fully open to insure that the ANSI/ASHRAE recommended velocity of 95-120 fpm is attained when the sash is moved to various user working levels. The minimum face velocity at any one measuring point should be at least 80 fpm.

2.1.6.2 However, a fume hood may be tested at a lower sash height, perhaps increasing the flow rate to permissible levels, if the following requirements are met:

2.1.6.2.1 A functioning airflow warning alarm is in service; or

2.1.6.2.2 A mechanical device limiting sash elevation (Sash-Stop) is installed with a warning sign posted to indicate sash height limitations.

2.1.7 CONTAINMENT – containment testes are conducted over the range of operating configurations afforded by the hood design.

2.1.7.1 This is taken at the different target face velocities or exhaust flow rates to determine operational boundary conditions and hood limitations.

2.2 CAUTION and DANGER warning signs will be posted in the following conditions.

2.2.1 Hoods found to have serious deficiencies are posted with warning signs to indicate usage limitations (see below). Since hood face velocity (average flow rate of air being pulled into the hood) is the primary function necessary to prevent exposure to airborne hazardous materials, insufficient face velocity most often results in warning signs being posted to limit or restrict use of the hood.

2.3 CAUTION – UNSAFE CONDITION: Inspection by the certification company has determined that this hood DOES NOT MEET the university minimum standard for face velocity airflow of 80 feet per minute (fpm).

2.3.1 This hood shall not be used for research involving extremely hazardous substances until repairs have been made, EHS has been notified, and re-inspection has been completed by a certified company.

2.3.2 The Lab Manager and Building Maintenance have been notified.

2.3.3 Questions should be directed to EHS at 1745/1746.

2.3.4 Caution Sign Clarification

- 2.3.4.1 If the certification company determines the hood face velocity to be less than 95 fpm, but above 80 fpm and pass the containment test, a "CAUTION" sign is posted to warn users that the face velocity does not meet requirements for handling extremely hazardous materials with a high degree of hazard.
 - 2.3.4.2 However, the hood may still be used to handle materials that are NOT considered extremely hazardous (low degree of hazard) as determined by the researcher or other responsible person knowledgeable with the hazard(s).
 - 2.3.4.3 Questions regarding the degree of hazard may be directed to EHS.
- 2.4 DANGER – UNSAFE CONDITION: This hood has been placed OUT OF SERVICE by the certifying company.
- 2.4.1 This hood SHALL NOT BE USED until repairs have been made, EHS has been notified, and a re-inspection has been completed.
 - 2.4.2 Use of this hood will be in violation of this University Administrative Procedure, the ANSI/AIHA Z9.5-2003.
 - 2.4.3 The Lab Manager and Building Maintenance have been notified.
 - 2.4.4 Questions should be directed to EHS at 1475/1746/1743.
 - 2.4.5 Danger Sign Clarification
 - 2.4.5.1 If the hood face velocity is found to be less than 80 fpm and fail containment test, a "DANGER" sign is posted to warn users that the hood has been placed "out of service" and cannot be used for handling any hazardous material until repaired.
 - 2.4.5.2 A "DANGER" sign may also be posted if a hood is otherwise determined unsafe for use.

3. PROCEDURES – REPAIR

- 3.1 Fume hood deficiencies requiring repair are reported to Building Maintenance at x3700 and tracked through their work order process and by the responsible Lab Manager.
 - 3.1.1 On completion of the work order, contact the certifying company for re-inspection of the hood to insure that all requirements are met.
 - 3.1.2 Once a hood has passed inspection, a sticker is placed on the hood (usually on the frame) as shown below. The inspection date should not be expired and the face velocity should be 80 fpm or greater.

[Attachments1: Lab Hood Diagrams](#)

Contact Office: Environmental Health and Safety Department 936-261-1745