



## LABORATORY HOOD VENTILATION REQUIREMENTS

*Prepared by Chief Executive Office, Risk Management Branch  
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**NOTE: By January 1, 2008, laboratory hoods should be equipped with a quantitative airflow monitor that continuously indicates whether air is flowing into the hood during operations.** The airflow monitor should measure either the exact rate of inward airflow or the relative amount of inward flow (e.g. diaphragm pressure gauges, inclined manometers and vane gauges). The requirements for a quantitative airflow monitor could also be met by an airflow alarm system if the system provides an audible or visual alarm when the airflow decreases to less than 80% of the required ventilation rate.

Laboratory hoods should be operated at all times when the hoods are in use and for a sufficient time thereafter to clear the hoods of airborne hazardous substances. Laboratory hoods should provide an average face velocity of at least 100 feet per minute (fpm) with a minimum of 70 fpm at any point. Laboratory hoods should also meet the following requirements:

- The average face velocity should be obtainable with the movable sash fully opened. If the required velocity can only be obtained by partly closing the sash, the sash should be marked to show the maximum opening at which the hood will meet the average face velocity of 100 fpm.
- Hazardous substances in the hood should be covered or capped off when the hood is not in operation.

When a laboratory hood is in use to contain airborne hazardous substances and employees are not in the immediate area of the hood opening, the ventilation rate could be reduced from the average face velocity of 100 fpm to a minimum average face velocity of 60 fpm if the following conditions are met:

- The reduction in face velocity is controlled by an automatic system which does not require manual intervention and should increase the airflow to the minimum average face velocity when the hood is accessed.
- The laboratory hood has been tested at the reduced flow rate according to the tracer gas method specified in Section 7, Tracer Gas Test Procedure, of ANSI/ASHRAE 100-1995, Method of Testing Performance of Laboratory Fume Hoods.

- The record of the most recent tracer gas test results and the “as used” test configuration should be maintained as long as the automatic system is operable and thereafter for five years.