



11610

Laboratory Fume Hoods

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A. Summary

This section contains general design criteria for laboratory fume hoods.

B. System Design and Performance Requirements

1. Fume hoods in research laboratories must conform to with American Industrial Hygiene Association (ANSI/AIHA) Z9.5 Class A performance standards.
2. Laboratory fume hoods must conform to Yale University's "Guidelines for Safe Lab Design."
3. Laboratory design and fume hood provisions should fulfill the needs expressed by principal investigators in the "Investigator Questionnaire" prepared with Yale University.
4. Laboratory design should be consistent with Yale University specification Section 15990 – Laboratory Air Design.
5. Variable air volume fume hoods are preferred. Constant volume fume hoods are appropriate in some applications. Yale University will review fume hood system design on a case-by-case basis.
6. Noise from the laboratory ventilation system must not exceed NC 45 throughout the laboratory.
7. The average fume hood face velocity must be $100 \text{ fpm} \pm 10 \text{ fpm}$, with the vertical-sliding sash located 18" above the work surface.

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8. Fume hoods must run continuously to minimize potential hazards when the fume hoods are off.
9. General-purpose fume hood ductwork must be 304 stainless steel. The fan and housing must be corrosion resistant. Special-purpose hoods may be constructed of other materials only after a thorough review with the Office of Environmental Health and Safety.
10. Ductwork must be round to ensure uniform airflow.

C. Submittals

During the program phase of the design process, review laboratory ventilation systems with the Office of Environmental Health and Safety and with the Facilities Department.

D. Manufacturers

Subject to compliance with the design requirements, provide products by Kewaunee Scientific Equipment Corporation, Fisher Hamilton, or other manufacturer equivalent products approved by Yale University.

E. Quality Control

Laboratory ventilation systems, including fume hoods, must be commissioned. See [Section 01810: General Commissioning](#).