SANDER MECHANICAL SERVICE

Fume Hood Testing

NEBB Certified Performance Evaluation

Laboratory fume hoods are safety devices where hazardous chemicals can be handled safely while the fumes and vapors they generate are exhausted out of the building through a specialized ventilation system. Regular, periodic testing of laboratory fume hoods is critical to maintaining effective operation and ensuring the health and safety of your research staff.

As one of only a select group of contractors possessing the National Environmental Balancing Bureau (NEBB) certification for Fume Hood Testing, Sander Mechanical has established a reputation of integrity in the evaluation and calibration of laboratory fume hoods. As a competent contractor, Sander's technical team is qualified to complete fume hood performance testing in a manner that meets or exceeds the ANSI/ASHRAE 110 standard.

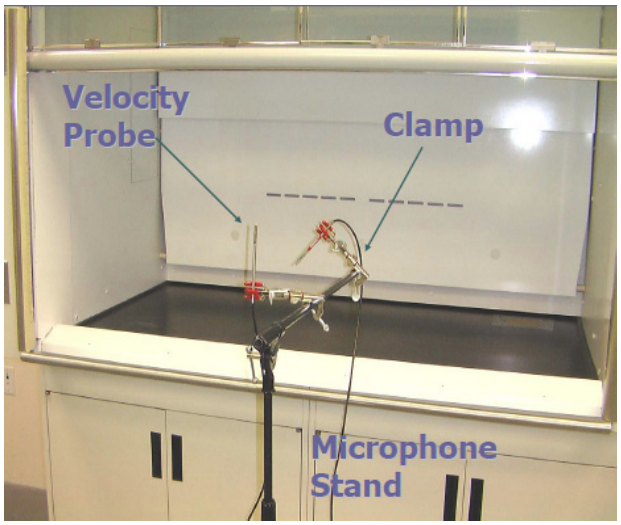
Why Test Fume Hoods?

- Provides a method of evaluating the fume hood's ability to contain and exhaust fumes under a set of standard conditions.
- Serves as a means for comparative analysis of fume hoods.
- Helps provide criteria for new fume hood procurement.
- Offers a method to commission and verify performance of new fume hood installations
- Manages risk and liability by regularly verifying and documenting that your fume hoods are operating according to established industry performance standards.
- Serves as a forensic tool to aid in identifying problems or deficiencies with an installed laboratory fume hood HVAC system.

Overview of Testing Program

- Perform all test procedures in accordance with the ANSI/ASHRAE 110 protocols and NEBB best practices.

- Perform face velocity measurement at sash design and full sash opening, including:
  - ✓ Multiple point readings to measure average face velocity;
  - ✓ Measurement of cross drafts;
  - ✓ Verification of VAV system operation and response; and
  - ✓ Calibration of airflow monitors.



- Perform small volume smoke visualization with Titanium Tetrachloride (TiCl4) smoke sticks.

- Perform large volume smoke visualization with theatrical smoke machine.

- Perform tracer gas containment testing using Sulfur Hexafluoride (SF6) to measure average escape in concentrations down to 0.01 PPM, including three static tests:
  - ✓ Positional testing done at sash design opening;
  - ✓ SME (sash movement effect) performed in the center position; and
  - ✓ Perimeter leakage test.

- Perform hood static stability test.

- Generate room sketch to keep track of room changes and environmental effects on hood.

- Review and evaluate all data collected to identify any system deficiencies.

- Document all findings and provide pass/fail sticker for hood(s) tested.

- Generate written report (with photographs) for the equipment maintenance record, including recommendations for remedying any identified performance issues.

Contact us today to take advantage of our expertise!

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