

Study on the Performance of Efficiency of Laboratory Exhaust Hoods

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Abstract

The Occupational Safety and Health Center (OSHC) conducted a study to determine the performance efficiency of laboratory exhaust hoods. The results gathered would provide a database and on the proper maintenance of these hoods to ensure the control of contaminants.

A total of 50 laboratory exhaust hoods installed in different universities, government research institutions and private companies were monitored.

Actual measurement was done by the used of scientific instruments, like a thermoanemometer and smoke tester to measure air velocity and to determine air directional pattern, respectively. Inspection of the laboratory exhaust system was also done to determine possible causes of poor performance of the laboratory exhaust hoods.

Results of the study showed that of the 50 laboratory exhaust hoods monitored, 66% passed the recommended and minimum control velocity of 0.5 to 1.0 meters per second (m/s), based on international standards.

Periodic maintenance and some minor corrections (i.e. increase in motor RPM, checking of loose fan belts, cleaning of fan blades and exhaust ductworks, etc.) will upgrade the performance efficiency of these laboratory exhaust hoods