



EVALUATION OF THE CLARITY AIR IONIZER ON CLEARANCE OF AIRBORNE ASPERGILLUS SPORES

METHODS

A chamber measuring 15'X7' ^{X 12'} was constructed for the purpose of conducting the study. The chamber contained no air supply, and a large air exhaust which was occluded during the experiment with a sheet of plastic.

50 mg. of dust containing $>10^6$ *Aspergillus niger* spores was aerosolized into the chamber using a vacuum cleaner with the bag removed. Quantitative air spore counts were taken with a New Brunswick Slit Sampler for three consecutive hours after aerosolization. The exhaust was uncovered and the room was allowed to air until spores could no longer be detected in the chamber.

The exhaust was again occluded with plastic, and an ionizer was suspended from the ceiling in the center of the chamber. After 30 minutes, with the ionizer still running, 50 mg of dust was aerosolized into the chamber and quantitative air spore counts were taken.

RESULTS

Immediately following aerosolization the density of spores in the air was too heavy to count. Spores in the control group reached countable levels after 45 minutes at which time the count was $106/M^3$. The air spore density dropped to $54/M^3$ 65 minutes after aerosolization. At 2 hours, no spores could be detected in the air.

In the experiment using the ionizer spores reached countable levels at 30 minutes, at which time the air spore count was $400/M^3$. By 45 minutes the spore count had dropped to $40/M^3$. At 65 minutes no airborne spores could be detected.

CONCLUSIONS

The ionizer had an effect on the speed with which a large "burst" of spores was cleared from the air of an enclosed, non-ventilated space.

A detectable drop in the air spore count was achieved after 30 minutes with the ionizer, compared to 45 minutes with the control. Air spore counts of zero were obtained almost twice as soon when the air ionizer was operating as when it was not.

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