

AiroCide PPT™ Air Quality-Improvement™ Systems

AiroCide PPT™ contains the same NASA-developed *AiroCide™ Air Quality-Improvement™* technology that is used in a variety of *AiroCide* product lines. In addition to serving the perishable preservation and food safety industry, the *AiroCide* technology is has been developed to kill/remove/eliminate airborne pathogenic and non-pathogenic microorganisms in vegetative and spore states (bacteria, mold & fungi, viruses and dust mites), allergens, odors and harmful volatile organic compounds (VOC's) in air in a variety of commercial, government, and residential market applications including the medical healthcare industry (*AiroCide* is listed as an FDA Class II Medical Device).

Summary

A study was conducted in the refrigerated cooler of a Atlanta, GA regional wholesale florist to determine if the *AiroCide* technology could reduce the amount of airborne mold and bacteria.

The *AiroCide* system in the cooler reduced the amount of airborne mold and bacteria by 92% and 58%, respectively, in 24 hours.

Facility

The 17,010 ft³ refrigerated cooler contained three sections that were divided by flexible plastic sheeting draped from the ceiling which allowed air to move freely throughout the entire cooler. The main section of the cooler housed mixed cut flowers in buckets, while two smaller areas held greens and flowers that had been prepared for shipment. Temperature in the cooler was maintained at 45°F at the time of the test.

Protocol

The test period consisted of two (2) consecutive days of air sampling. A baseline reading, with no *AiroCide* system operating, was conducted for comparison to the “Active On” test. After the *AiroCide* system (2 ACS-100 units) was operating for 24 hours, air samples were taken again the next day at the same sites and times of day. Each air sample measured two types of microbes, airborne bacteria and airborne mold. Samples were taken inside the cooler and directly outside the building.

Results

The *AiroCide* system in the cooler reduced airborne mold and bacteria by 92% and 58%, respectively, in 24 hours. These results are significant when compared to the airborne mold and bacteria levels outside the building, which increased by 43% and 342% respectively.

Mold

Test Site	Baseline	24 hrs.	
	CFU/m ³	CFU/m ³	% Change*
Floral Cooler	1,425	118	- 92%
Outside	495	707	+ 43%

Bacteria

Test Site	Baseline	24 hrs.	
	CFU/m ³	CFU/m ³	% Change*
Floral Cooler	141	59	- 58%
Outside	24	106	+ 342%

Copies of tests mentioned in this paper can be obtained by writing KesAir, Research & Development, 3625 Kennesaw N. Ind.Plwy., Kennesaw, GA 30144.

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