



## Evaluation of UVAIRx Technology Against Fungus

### Laboratory Fungal Tests

#### Phase One Fungal Testing- 12/20/19

This set of tests was conducted to compare the efficacy of four PCO units to kill fungal spores. A known number of spores of a fungus (*Neurospora crassa*) were plated onto dry petri dishes and exposed to each PCO unit for three hours. After incubation sterile growth medium was added to each dish and dishes incubated for 3 to 5 days at ambient temperature. The numbers of resulting fungal colonies were determined and compared to untreated controls to calculate the percent kill. A summary of several experiments is shown below.

Unit Tested	Average Kill % Per Unit Per Test		
	Experiment 1	Experiment 2	Experiment 3
Molekule Air	0%	19%	8%
Sharp FP-A80UW	10%	0%	3%
Air Oasis AO3000	16%	0%	0%
UVAIRx Ux105 STRD	26%	12%	29%
UVAIRx Ux105 PLUS	-	30%	19%

In each of the three independent tests, the UVAIRx units outperformed each of the other units. This dramatically shows the UVAIRx units are far superior to each competitor.

### Fungal Case Study Tests

#### University Athletic Facility- 5/31/2018

This test was conducted to determine the efficacy of UVAIRx PCO on molds in an athletic facility.

Samples were taken in three different areas of the facility that had been previously identified as problematic. Samples were taken before and after three units were placed and left operating for one week. The numbers of viable spores (CFUs) were determined by an outside laboratory and the results are below.

Sample Location	Training Room Window Sill	Sports Medicine Room	Stadium Training
Before-Test - Total CFUs	301	301	602
After-Test - Total CFUs	67	0	0
<b>Percent Kill</b>	<b>78%</b>	<b>100%</b>	<b>100%</b>

As in the previous study, the UVAIRx killed essentially all of the molds in each of the three areas. This shows that the UVAIRx Ux105 STRD could be used to prevent mold growth even in these high humidity areas.

#### Mold Remediation Study- 7/24/2018

Established mold colonization in an indoor living environment often requires remediation by physical and chemical means. We sought to determine if the UVAIRx Standard unit could be used to kill molds present in an existing mold area. The location of this test was in the crawlspace of a home under construction which had become colonized by mold. All floors were dirt, walls were concrete foundations, and 'ceiling' was wooden joists and plywood subfloor. Swabs were taken before and after treatment with a UVAIRx unit, installed vertically on a wooden post near the top of the crawlspace, and operated 8-9 hours a day for five days.

The swabs were sent to a third-party laboratory and the numbers of molds and bacteria determined. These results are summarized below.



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Sample Location	Bottom of Joist
<b>Before-Test - Total CFUs</b>	608
<b>After-Test - Total CFUs</b>	19
<b>Percent Kill</b>	<b>97%</b>

Similar to the above test, the UVAIRx PCO technology was effective in eliminating the vast majority of pre-existing molds in the crawlspace.

### **SUMMARY**

These tests show conclusively that the UVAIRx PCO technology was effective in killing mold spores under stringent laboratory conditions and, more importantly, was effective in two very different real-world situations.