Healthcare - Family Practice



Air Disinfection Biosecurity

Air Samples

A series of pre-treatment air samples were taken on 7/16/21 and 8/5/21, and in-treatment samples on 8/19/21. Exterior untreated air samples were also taken during those same times.

Sample Date	Treatment	# of Samples	Location	Avg cfu/m ³	% Reduction
07/16/21	Pre-treatment	17	Area 1	345	N/A
08/19/21	In-treatment	13	Area 1	69	80.0
08/05/21	Pre-treatment	17	Area 2	356	N/A
08/19/21	In-treatment	12	Area 2	50	86.0
07/16/21	Untreated	3	Exterior	1,378	N/A

Noted below are airborne organisms found during the pre-treatment & in-treatment sampling, excluding outside samples

Species	Raw Count Area 1 Pre-treatment	Raw Count Area 1 In-treatment	Raw Count Area 2 Pre-treatment	Raw Count Area 2 In-treatment
Penicillium, aspergillus types	1,300	375	1,000	225
Penicillium brevicompactum	985	250	880	185
Penicillium purpurogenum	855	175	810	140
Aspergillus fumigatus	720	100	750	50
Cladosporium sphaerospermum	655	< 5	623	< 5
Ulocladium chartarum	565	< 5	510	< 5
Absidia spp	460	< 5	440	< 5
Firmicutes spp	325	< 5	320	< 5

Area 1 Pre-Treatment



In-Treatment



Area 2



In-Treatment





The initial bioburden from the pre-treatment samples showed an average of 345 & 356 cfu/m³ for Areas 1 & 2, respectively. At > 300 cfu/m^3 this is considered **not** acceptable, needs corrective action.

In-treatment samples showed a 80.0% & 86.0% reduction in airborne organisms for Areas 1 & 2, respectively. At < 100 cfu/m³ this is now considered **clean and** acceptable.

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Contact Samples

A series of pre-treatment contact swabs were taken on 7/16/21 & 8/5/21, and in-treatment contact swabs on 8/19/21.

Sample Date	Treatment	Number of Samples	Location	Avg cfu/cm ²	% Reduction
07/16/21	Pre-treatment	14	Area 1	36.7	N/A
08/19/21	In-treatment	13	Area 1	3.2	91.3
08/05/21	Pre-treatment	14	Area 2	24.8	N/A
08/19/21	In-treatment	11	Area 2	3.1	87.5

Pre-treatment samples showed an average of **36.7 & 24.8 cfu/cm**² for Areas 1 & 2, respectively. This is substantially > 10 cfu/cm², which is considered **not acceptable and needs corrective action**.

The in-treatment swabs, taken 8/19/21, showed an average of **3.2 & 3.1 cfu/cm²** for Areas 1 & 2, respectively. That's a **91.3% & 87.5% reduction** in bioburden. At < 5 cfu/cm², these areas are considered **clean and acceptable**. Continued treatment will further reduce these counts.