



SmartAir Pro MS2 Phage Virus Removal

Summary Report from Smart UV.



Smart UV's SmartAir Pro UV-C Air Filtration System Successfully Removes MS2 Phage Icosahedral Virus In A Scientifically-Controlled & Independent Testing Facility

Purpose

To determine the multi-pass efficacy of SmartAir Pro for removing aerosolized MS-2 (ATCC 15597-B1) bacteriophage in a 1000 ft³ stainless-steel chamber.

Set Up

The MS-2 bacteriophage was harvested and titrated to 3E8 pfu/ml. Suspensions of the organisms were then aerosolized into the chamber using a nebulizer prior to powering the test device. The test chamber air was sampled at 5-minute intervals using a SKC BioStage cascade impactor for 1-minute sampling periods. The cascade impactors were calibrated to an airflow rate of 28.3 liters/min and the sampling inlet was situated at the midpoint of the test chambers. The recovered organisms were enumerated after 24-hours of incubation.

Result

SmartAir Pro significantly reduced the aerosolized MS2 Virus by 97.4% from the air within a 30-minute time span in a 1000ft³ chamber. Testing is done in triplicate.

Full Report

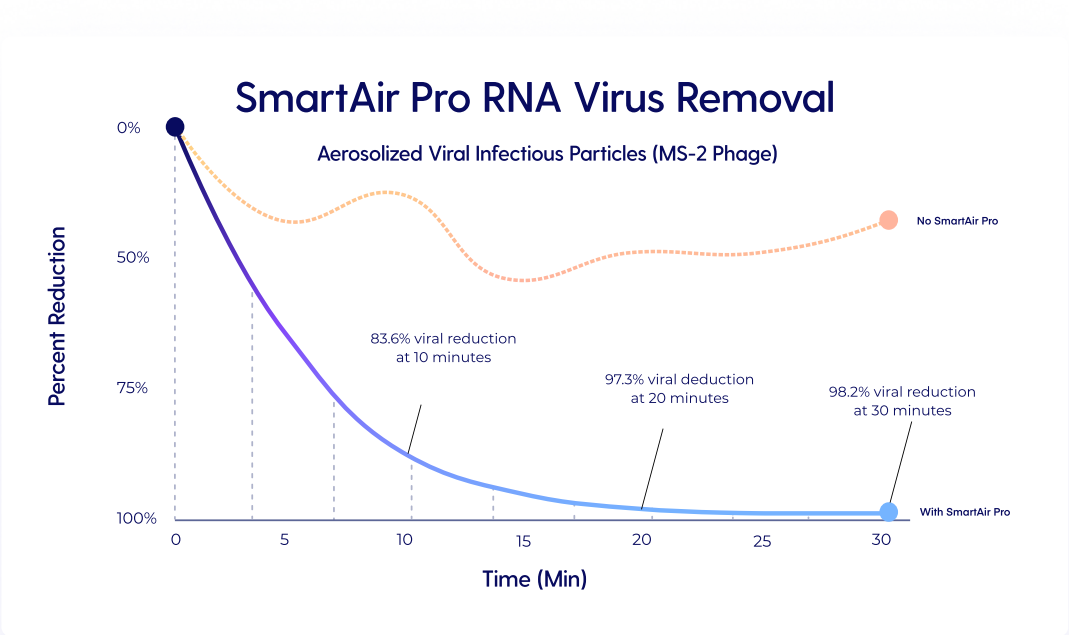
[Link to full report](#)

Multi-Pass Efficiency for MS2 Phage Virus Removal

Testing Results

Time (min)	Natural Decay	SmartAir Pro	Viral Removal (%)
0	105.8	112.4	N/A
5	72.1	42.2	62.5
15	85.5	18.4	83.6
20	55.7	5	95.5
25	62.6	3	97.3
30	72.1	2	98.2

SmartAir Pro Removal Efficiencies Graphed



Before and After MS-2 Pfu

SmartAir Pro MS-2 Pfu at 0 time



SmartAir Pro MS-2 Pfu at 30 minutes

