



# SmartAir MS2 Phage Virus Removal

Summary Report from Smart UV.



## Smart UV's SmartAir 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 for removing aerosolized MS-2 (ATCC 15597-B1) bacteriophage in a 1000 ft<sup>3</sup> 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 significantly reduced the aerosolized MS2 Virus by 94.4% from the air within a 30-minute time span in a 1000ft<sup>3</sup> chamber. Testing is done in triplicate.

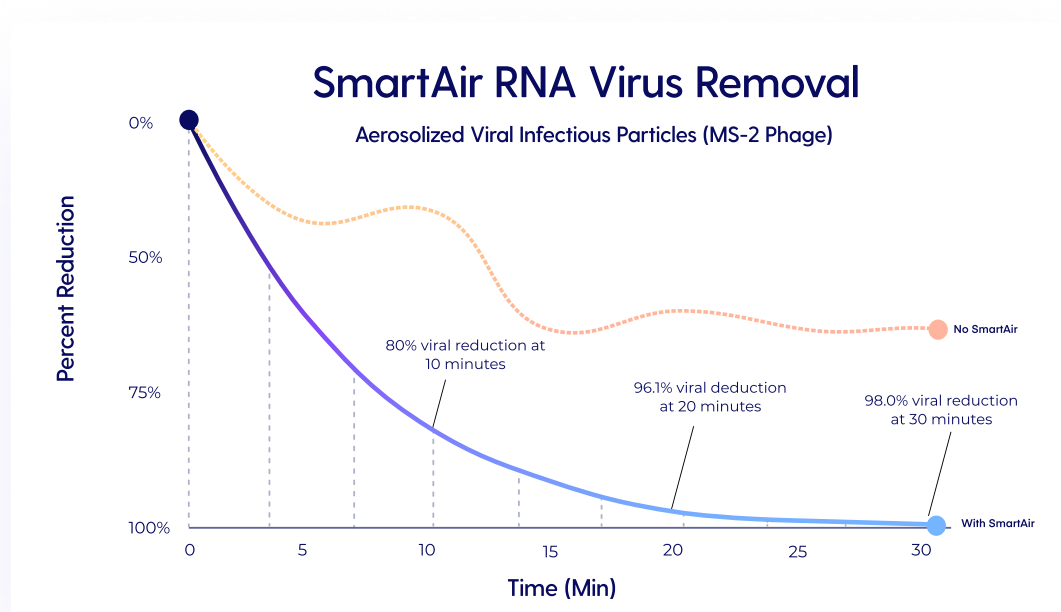
**Full Report** [Link to full report](#)

## Multi-Pass Efficiency for MS2 Phage Virus Removal

### Testing Results

Time (min)	Natural Decay	SmartAir	Viral Removal (%)
0	50.0	51.2	N/A
5	30.1	18.4	64.1
15	33.4	10.1	80.0
20	17.4	5	90.2
25	19.4	2	96.1
30	17.4	1	98.0

### SmartAir Removal Efficiencies Graphed



### Before and After MS-2 Pfu

SmartAir MS-2 Pfu at 0 time

SmartAir MS-2 Pfu at 30 minutes

