Airborne MS2 Bacteriophage Neutralization with HALO-LED™ Technology by RGF Environmental Group, Inc.

Intertek, an accredited independent laboratory conducted an efficacy study evaluating the RGF Environmental Group HALO-LED™ (Part # REME-LED) in-duct air purification device for the microbial reduction of MS2 Bacteriophage. The HALO-LED™ is an innovative Indoor Air Quality device that is both mercury free and zero ozone compliant.

MS2 is a non-enveloped RNA virus that is the preferred surrogate for SARS CoV-2. The evaluation was performed in a controlled environmental chamber measuring 10'x10'x10' or 1,000 cubic feet. MS2 in a microbial suspension with a challenge concentration of 4.7 x 10^8 was aspirated into the chamber and air samples were taken at 15-minute intervals over a period of two hours. The samples were plated and incubated overnight.

A control study was conducted to measure the natural decay that occurred over the two-hour period. The viral growth on the test plates were compared to the natural decay control.

The percent reduction associated with the **HALO-LED™ treatment was 99.9% after two hours** of exposure.

Study Design

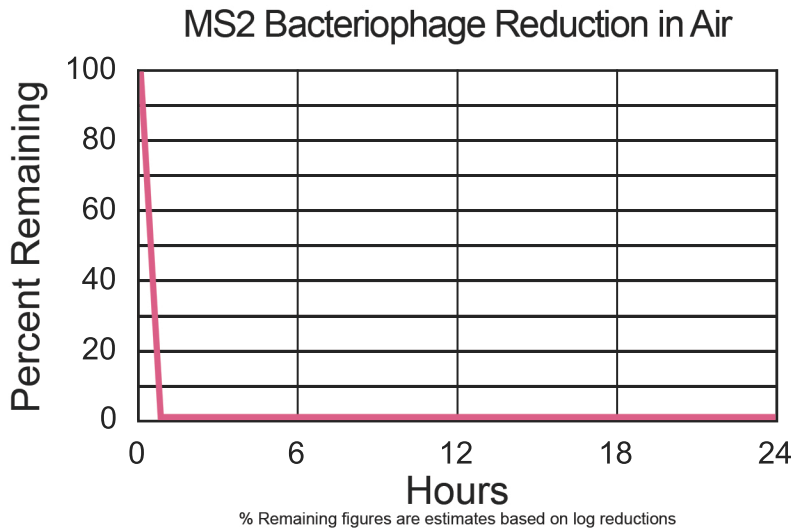
The study was conducted at the Intertek Microbiology laboratory in Columbus, OH. A HALO-LED™ in-duct air purification device was provided by RGF Environmental for use in the microbial reduction rate test. The microorganism used in the study was MS2 bacteriophage, a small non-enveloped RNA virus (ATCC number 15597-81).

The test chamber measured 10'x10'x10' or 1,000 cubic feet. The MS2 microbial suspension was aspirated into the chamber. The temperature of the test chamber was maintained at 21° C and relative humidity at 41%.

Air samples were taken from the test chamber once the unit was turned on and sampling was taken every 15 minutes over a period of 2 hours, and then plated. The process was then repeated without the test unit in the chamber to provide the natural decay results. All plates were incubated overnight and viral growth on the test plate was compared to that of the natural decay control.

Air sampling took place using an SKC BioStage single-stage impactor for 30 seconds at 12L/min (0.424 cubic feet/min). Results shown represent the percent reduction at 120 minutes.

Testing summary: 99.9% inactivation of the airborne MS2 Bacteriophage within 1,000 cubic feet chamber using an air-sampling model.



% Remaining figures are estimates based on log reductions

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DISCLAIMER: The summary and any comments herein are based on the results from an independent laboratory study performed under controlled conditions and are not in any way medical claims. The product(s) and technologies described are not medical devices and are not intended to diagnose, treat, cure, or prevent any disease, virus or illness.