

# LMS Technologies Chamber Test Summary

Devices Tested: RGS, RGS mini, and Kestrel

Manufacture: Genesis Air, inc.

Test agency: LMS Technologies

Date: May 3<sup>rd</sup>, 2023

Summary by: Connor Croak – Genesis Air

## Purpose:

The purpose of this test was to demonstrate the effectiveness of Genesis Air, inc. air purifiers at deactivating and removing airborne biological contaminants. The results of this test were submitted to the U.S. FDA for evaluation.

## Test Procedure:

This multi-pass test consisted of 3 biological contaminants. MS2 Bacteriophage (ATCC 15597-B1), Staphylococcus Epidermis (ATCC 12228), and E. coli (ATCC 23724). A test chamber 4000 ft<sup>3</sup> in volume was used to test the Genesis Air RGS and RGS mini. A test chamber 1000 ft<sup>3</sup> was used to test the Kestrel. The RGS was tuned to 625 CFM, the RGS mini was tuned to 500 CFM, and the Kestrel was tuned to 63 CFM.

## Sampling Method:

Before the test, it took one hour to aerosolize the test organism into the chamber. Once aerosolized, the test started. Every 10 minutes during the test, a sample of the chamber was taken to measure the contaminant concentration. Each sample was taken by a SKC Bio Stage cascade impactor for a 1-minute sampling period. The cascade impactor had an air flow rate of 28.3 L/min. The recovered organisms were enumerated after 24-hours of incubation.

## Conclusion:

Data Summary Table									
Species	1-Hour Percent Reduction			1-Hour Log Reduction			CARDm (CFM)		
	RGS	RGS mini	Kestrel	RGS	RGS mini	Kestrel	RGS	RGS mini	Kestrel
Staphylococcus Epidermis (Gram Positive)	99.99%	99.99%	99.97%	3.958	4.041	3.580	176	158	113
MS2 Bacteriophage (Virus)	99.99%	99.99%	99.96%	4.023	3.826	3.349	402	482	80
Escherichia Coli (Gram Negative)	99.99%	99.99%	99.96%	4.239	3.954	3.398	204	156	97