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Efficacy Study Summary

Study Title	<u>EFFICACY OF REACT-AIR DESTROYER TECHNOLOGY AGAINST AEROSOLIZED SARS-COV-2</u>
Laboratory Project	# 1073
Guideline:	Modified ISO standards as no international standards exist.
Testing Facility	Innovative Bioanalysis, Inc. Study Dates: Study Initiation Date: 5/10/2021
Study Completion Date:	06/21/2021
GLP Compliance	All internal SOPs and processes follow GCLP guidelines and recommendations.
Test Substance	SARS-CoV-2 USA-CA1/2020

Description The Reaction Group React-Air Destroyer Technology was designed to be used in conjunction with their range of portable standalone air purification systems for use in commercial environments. This in vitro study is being conducted to determine the efficacy of the React-Air Impact device in reducing the aerosolized pathogen, SARS-CoV-2 when operating.

Test Conditions The test was conducted in a large, sealed environment that complied to BSL-3 standards and was inspected for any leaks prior to usage. The temperature during all test runs was approximately 72 ±2°F, with a relative humidity of 35%. Air samplers were calibrated by the manufacturer on September 3, 2020 and set at a standard flow of 5.02L/min. Calibration records indicate a 0.20% tolerance. The nebulizer was filled with the same amount of viral stock (6.32 x 10⁶ TCID₅₀ per mL) in FBS-based viral media and nebulized at a constant rate while four mixing fans were running simultaneously to ensure homogenous air.

Test Results When tested against aerosolized SARS-CoV-2 three times, the device showed a peak reduction of **92.03%** and an average reduction over the course of three tests runs of 89.27% of active virus after 15 minutes of operation.

Control Results Two control tests were conducted without the device operating and samples were taken at the corresponding timepoints used for the challenge trial. The results showed the natural viability loss over time in the chamber and served as a comparative baseline to calculate viral reduction.

Conclusion The study showed the React-Air Destroyer Technology was able to reduce the concentration of aerosolized SARS-CoV-2 in the specified space after 15 minutes of operating. The test was carried out to simulate a real-life environment. The React Air Destroyer Technology proved in testing to reduce exposure to SARS-CoV-2 USA-CA1/2020 up to 92.03%.

This test was not a direct-flow test / one pass test. A direct-flow / one pass test takes contaminated air and introduces it directly into the unit being tested. If a direct-flow test had been undertaken, it is reasonable to assume that the results would have shown close to 100% effectiveness, given the level of HEPA grade and UVC dose being administered.

The outcome of the tests undertaken and documented in this report were to assess the React-Air Technology's performance in, as far as reasonably practicable, a real-life scenario.