



# gako UV-C Air Sterilizer

Efficacy Report for Sars-Cov-2

**gako**

## UV-C Air Sterilizer

Microorganism's transmission through the air is one of the major concerns of public health worldwide. This transmission can easily occur due to airborne droplets present in the air, which can carry several pathogenic microorganisms with the potential risk of causing seasonal or pandemics diseases.<sup>1,2</sup>

The severe acute respiratory syndrome coronavirus 2 (Sars-Cov-2), the responsible virus for causing the coronavirus disease 2019 (Covid-19), has emerged as a serious pandemic disease and is mainly transmitted through infected respiratory droplets spread in the air or on surfaces, and through close contact to infected people.<sup>1,3</sup>

Due to the rapid increase and spread of the Sars-Cov-2, many protocols and procedures for keeping the number of infections under control have been implemented. The ultraviolet (UV) light disinfection systems have gained a lot of attention because of their capacity to neutralize and avoid microorganism replication. The UV-C light is a short-wave radiation (100 – 280nm) commonly applied on disinfection systems, as this wavelength is known to be strongly absorbed by aerosol droplets.<sup>3,4</sup>

gako UV-C Air Sterilizer is a device designed for air disinfection using high-intensity germicidal lamps, a method that can be used for safe disinfection of environments where health professionals, patients, students, and people in public places are exposed to contagious risk factors.

To prove the efficacy of the gako UV-C Air Sterilizer technology, a study has been performed by an independent laboratory (Eurofins, Brazil).

## Test Report COVID-19 COVID-19 Study

The aim of this study was to provide efficacy data on the usage of the gako UV-C Air Sterilizer on the neutralization of samples containing Sars-Cov-2.

To perform the study, several contaminated samples were placed in the air chamber of gako UV-C Air Sterilizer, in critical positions based on the airflow inside the device and were analyzed after their exposition to the UV-C radiation while the air circulation operation was on.

The results showed that, after **10 seconds** of operational time, gako UV-C Air Sterilizer **significantly reduced the viral load** on the samples, as measured by reverse transcription-polymerase chain reaction (RT-PCR).

This preliminary promising result is the beginning of further experiments regarding the effectiveness of the gako UV-C Air Sterilizer device in different airflow conditions in closed spaces.



## Study materials and methods

Sampling materials: Swab with Lethen broth contaminated with Sars-Cov-2 sample. Contaminated swabs placed in 3 different spots in the device (samples 1, 2, and 3), with different exposition to the UV-C light. All tests were performed in triplicate (30 tests in total). Samples were tested through reverse transcription-polymerase chain reaction (RT-PCR). After 10 seconds of exposition, 55% of the samples were negative for Sars-Cov-2.



## References

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