



# FagronLab™ UVGI-80 Air Sterilizer

Efficacy Report for Sars-Cov-2



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 pandemic 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>

FagronLab™ UVGI-80 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 FagronLab™ UVGI-80 Air Sterilizer technology, a study has been performed by an independent laboratory (Eurofins).

## Test Report

The aim of this study was to provide efficacy data on the usage of the FagronLab™ UVGI-80 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 FagronLab™ UVGI-80 Air Sterilizer, in critical positions based on the airflow inside the device, and were analyzed after their exposure to the UV-C radiation while the air circulation operation was on.

The results showed that, after 10 seconds of operational time, FagronLab™ UVGI-80 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 FagronLab™ UVGI-80 Air Sterilizer device in different airflow conditions in closed spaces.

## Study materials and methods

Sampling materials: Swabs with Lethen broth contaminated with Sars-Cov-2 sample. The contaminated swabs were placed in 3 different spots inside the device, with different position exposure to the UV-C light. All tests were performed in triplicate (30 tests in total), in different time intervals, and samples were tested through reverse transcription-polymerase chain reaction (RT-PCR). Already after 10 seconds of exposure, the total absence of Sars-Cov-2 was observed in 55% of the samples.



## References

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