



UVC Air Filtration Test Report

August 10th, 2020

The device named EIR UVC filtration device was tested in terms of killing efficiency of airborne microorganisms. For this purpose, the device was operated for 6 hours in a room with 75m³ air volume, and air samples were taken at the time intervals as shown in the picture below and evaluated in terms of the living microorganism it contains. Air samples were taken by blowing a total of 1m³ air on Mueller Hinton medium in a petri dish with an automatic air sampling device, enabling the microorganisms to adhere to the medium, before the device was turned on and at 30 minutes, 1, 2, 3 and 6 hours after it was turned on. After sampling, media were kept in a 37°C incubator for 48 hours. The bacterial and fungal colonies formed were counted and the number of viable microorganisms in the air was calculated in terms of colony forming units (cfu), according duration of air cleaning.

Conclusion: It was determined that EIR UVC air filtration device reduced living microorganisms from the air in a room with a volume of 75m³, by 86% in 30 minutes, 92% in 1 hour, 95% in 2 hours and after 2 hours kept microorganism at 5% level compared to the concentration of microorganisms before the instruments was turned on.

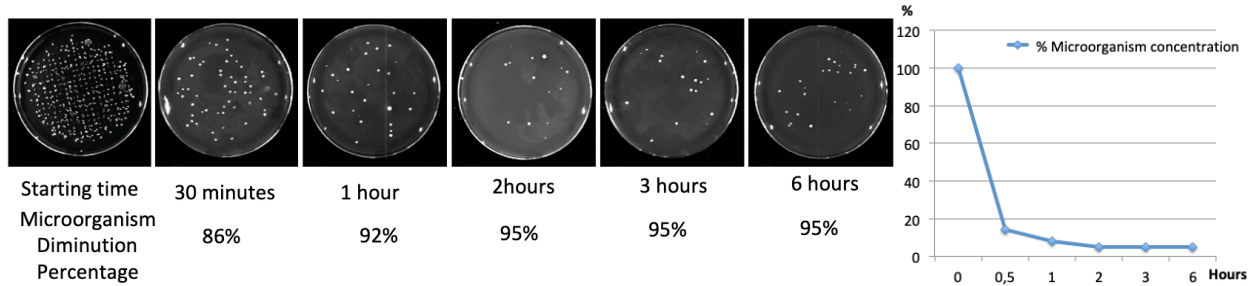


Figure: Microorganisms that attach to the medium plates and form colonies at certain intervals before and after the device is activated, showing the rate of cleaning of the air by EIR UVC air filtration device, depending on time. Each colony (white spots) formed indicates a viable microorganism that fell into the medium during sampling.

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