

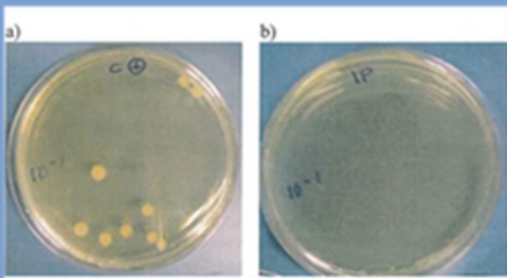


Reduction of the viral load present in indoor environments, compatible with the presence of human beings.

Applications

Improves air quality in:

- **Vehicles and collective means of transport.**
- **Spaces with a large number of people.**



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Spanish Version



AIR PURIFICATION DEVICE THROUGH IONIZATION

The Department of Optoelectronics and Missile Sciences of the National Institute of Aerospace Technology investigates the elimination of pathogens, such as SARS-CoV-2, from the air.

Description

The air purification device is capable of cleaning the air of aerosols contaminated with pathogens, such as SARS-CoV-2, through a combination of systems that, by themselves, would not be effective in interior spaces with a low natural renewal rate.

The air undergoes treatment by ionization, filtration and UV radiation, following this process: first, ionization of aerosols and particles present in the air (including pathogens), without the emission of ozone or other oxidants; subsequently, the air is treated with UV-C radiation system and, finally, it passes to a filtration system that contains an active carbon filter with low pressure drop, where particles and pathogens are trapped, being treated by the previous UV-C type radiation. The quality of the air thus treated is controlled by continuous monitoring systems.

This device allows the rate of pathogens in aerosols to be reduced by at least 3 orders of magnitude in the flows usually treated by conventional air conditioning systems.

Competitive advantages

- Reduction of the rate of pathogens in the air by more than 95% (compared to a conventional HEPA filter).
- Compatible with human presence and without the generation of biohazardous waste or oxidation in materials and facilities.
- High energy efficiency and easy maintenance.
- Easily coupled and compatible with previously implemented air conditioning systems, as it does not produce significant load losses.

Situation

The technology is protected by utility model. Validated and demonstrated. Looking for collaboration for tests in real conditions and subsequent technology transfer.

