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INACTIVATION OF ENVELOPED VIRUSES AND BACTERIA IN THE AIR AND ALL INANIMATE SURFACES WITH LEGIONELLA-X 100 VIA ULTRAVIOLET GERMICIDAL IRRADIATION (UVGI)

























LEGIONELLA-X®



Overview

In today's world of global economy, business owners and corporations alike, are constantly under the threat of ever-increasing risks from epidemic and pandemic outbreaks of contagious diseases and viruses. Corporate unpreparedness will lead to the failure of preventing or containing these outbreaks that will inevitably have a serious impact on the business operations or even its survival.

In this era of unprecedented global connectivity, easy and fast air travel has created a new transmission path for contagious diseases and germs to spread freely. Proper personal hygiene is crucial in reducing the spread of diseases and germs especially in a workspace environment, where employees and employers are in close interaction for possibly more than 8 hours a day. An effective air treatment solution should be put in place to reduce potentially harmful bacteria and germs in the workspace environment. This preventive measure not only helps to reduce the possibility of cross-contamination, it will also ensure a generally low germ environment.

Introduction

The Legionella-X 100 Air Sterilizer is effective infection control solution against airborne contaminants such as viruses, bacteria, bad odour, smoke and fumes from cigarettes and some household products. Our constant exposure to these indoor air pollutants generate harmful effects of our well-being.

Why Legionella-X 100 Air Sterilizer

- Improves IAQ Indoor Air Quality
- Reduce certain Hospital Acquired Infections (HAIs)
- · Reduction in HAI medication use
- · Reduction in HAI lab tests
- Reduction in patient morbidity and mortality
- · Reduction in staff absenteeism
- · Epidemic protection
- Surface decontamination

Features & Benefits of Legionella-X 100

- Eliminates viruses, bacteria and fungi in the air and on surfaces
- Removes all types of odour
- No filters needed
- · Maintenance free
- Silent operation
- Revitalizes and refreshes stale air

Areas of Use

- · Hotels / Serviced Apartments
- Cineplexes
- Washrooms
- Storage facilities
- · Refuse collection facilities
- AHII
- Automotive/Transport
- Offices & Homes
- Shopping Centres
- Healthcare facilities

LEGIONELLA-X[®]

LEGIONELLA-X 100 AIR STERILIZER USING UVGI TECHNOLOGY

Introduction

Viruses are small, independent particles, built of crystals and macromolecules, unlike bacteria, they multiply only within the host cell. They transform protein of the host cell into proteins of their own. UV destroys viruses by high energy electrons passing through or diffusing through the protein coat into the nucleic acid core, resulting in damage of the viral RNA.

Description

The Legionella-X 100 Air Sterilizer using Photochemical Reaction was developed to combat the Enveloped Viruses such as Coronavirus and Influenza Viruses.

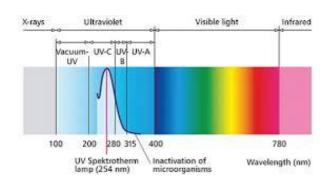
Legionella-X 100 Air Sterilizer will emit ultraviolet light which is absorbed by proteins, RNA and DNA in each microorganism. Absorption of UV by proteins in membranes at high fluences (UV doses) ultimately leads to the disruption of the cell membrane destroying the protein coat and hence death of the cell.

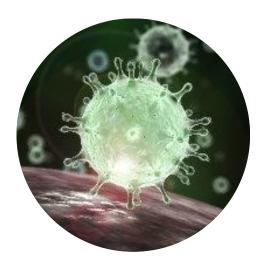
Legionella-X 100 Ultraviolet germicidal irradiation (UVGI) is a disinfection method that uses short-wavelength ultraviolet (UV-C) light to kill or inactivate microorganisms by destroying nucleic acids and disrupting their DNA, leaving them unable to perform vital cellular functions.

Mechanism of UV disinfection

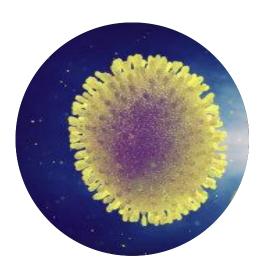
Virus is made up have core genetic material, either RNA or DNA surrounded by a protective coat called capsid which is made up of protein. The nucleic acid may be single or double-stranded. The entire infectious particle, called virion, consists of the nuclei acid and outer protein.

Legionella-X 100 uses the photochemical dimerization of thymine pairs disrupts the structure of the DNA. So that if enough thymine dimers are formed, the DNA cannot replicate in cell mitosis. This then is the fundamental mechanism of VU disinfection.





coronavirus



H5N1 virus



LEGIONELLA-X 100 AIR STERILIZER USING UVGI TECHNOLOGY

Advantages of Legionella-X 100

works silently

The Legionella-X 100 does not use a fan or mote, so it is virtually silent

durability

The Legionella-X 100 is designed to be durable. There is no mechanical parts for maintenance

low power consumption

It operates at a low wattage and therefore the cost of maintaining a clean air environment is negligible

maintenance free

The Legionella-X 100 is maintenance free. Unlike traditional air sterilisers that require frequent cleaning or chemical refilling which easily incurs additional cost and time. With Legionella-X 100, you can enjoy a hassle free fresh air environment

built for continuous operation

The Legionella-X 100 is designed to operate continuously throughout the year

Specifications of Legionella-X 100

Effective area

up to 18 square meters (2.5 metres height)

Power input

220-230V

Power consumption

18 watts

Warrantv

12 months

Legionella-X 100 that consists of a low-pressure dual band lamp using a wavelength from 185 nm to 253.7 nm. Also available in 240nm wavelength



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