

AIR MEDIC

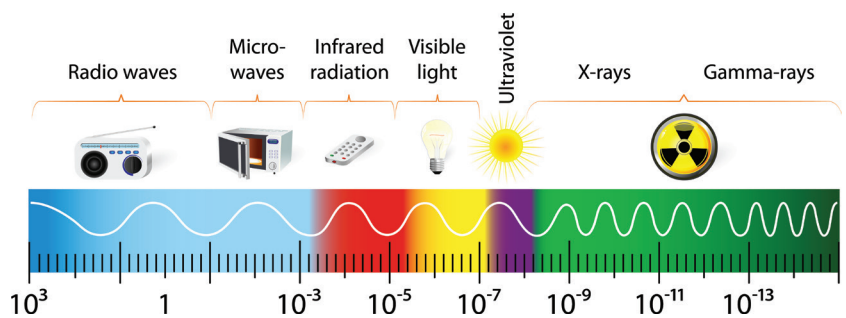
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How UV Air Treatment Works

Ultraviolet germicidal irradiation 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 #2.

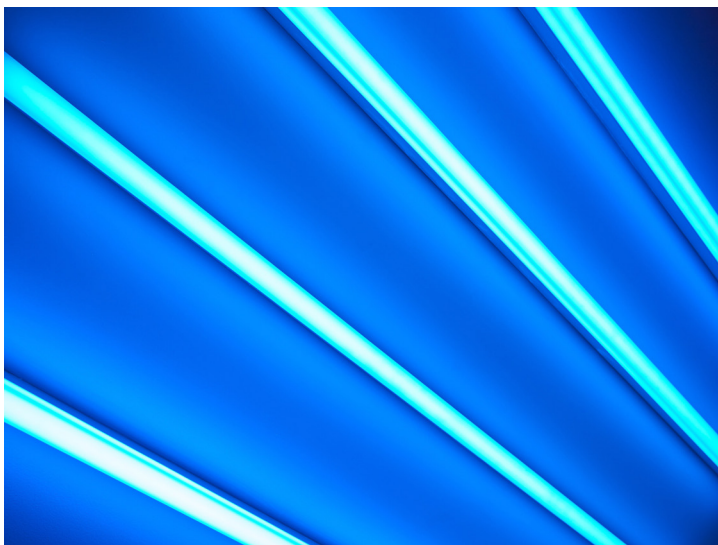
As we all know the sun emits ultraviolet light which is controlled by the earth's ozone layer to become a natural controller of germs but this does not extend to indoors where occupant densities are higher than ever and rising. An appropriate dosage of UVC light placed appropriately in the HVAC system or building can inactivate microorganisms such as bacteria, viruses, molds and other pathogens.

THE ELECTROMAGNETIC SPECTRUM



We're told we spend 90% or more of our time indoors (Australian Government department of the Environment and Energy). The CSIRO estimates that the cost of poor indoor air quality in Australia may be as high as \$12 billion per year. In recent years, comparative risk studies performed by the US EPA and its Science Advisory Board have consistently ranked indoor air pollution among the top five environmental risks to public health. These challenges require a holistic approach starting with indoor air testing or indoor air quality audit which

will usually lead to a mix of AC Filtration, ventilation systems, HVAC design / HVAC optimisation to bring the system up to best practise. But even with all this in place keeping airborne microbes under control effectively usually requires a UV dosage in the system to keep the building occupants healthy and performing at their best. UVC light or Ultraviolet Light has been used for many years for surface and air sterilization in applications such as laboratories, doctor's surgeries, hospitals and food manufacturing plants but is often sized using rules of thumb or industry averages even though systems can be designed using methodology proven effective through research. The great news is that there are help here locally to inspect, design and supply a system that can treat your indoor air keeping your organisation more productive.



References

<https://www.environment.gov.au/topics/environment-protection/air-quality/indoor-air>
"Word of the Month: Ultraviolet Germicidal Irradiation (UVGI)" (PDF). NIOSH eNews. National Institute for Occupational Safety and Health. April 2008. Retrieved 4 May 2015