

Virus Disinfection with UV-C Light in Cardiology Practice Case study of the improvement of infection control for patients and staff

Viruses, bacteria and other microorganisms spread through tiny water droplets in the air, so-called aerosols. They can survive there for a long time and are transmitted from host to host. The risk is particularly high in rooms with many people - such as waiting rooms, offices, gyms or classrooms in schools. Often, the situation is aggravated by the fact that these rooms cannot be well ventilated or there is no central ventilation. Especially in winter, ventilation is also unpleasant: ideal conditions for viruses.

UV-C light is energy and very effective against viruses, bacteria and fungi. Especially viruses, such as the SARS-CoV-2 virus and its mutations are easily destroyed by it. They have only a thin lipid (fat) layer. This is easily penetrated by UV-C light and destroys the virus immediately. Elderly and pre-diseased patients belong to the risk group for Corona and need particularly high protection.

Since January, an internal medicine and cardiology practice in Aschaffenburg has been equipped with Soluva Air W UV-C air filters from Heraeus Noblelight. Studies show that UV-C light can make surfaces germ-free. Recently, it has been proven that this also applies to microbially contaminated air that is directed past UV-C light sources by fans. This is of particular importance in the context of the COVID 19 pandemic, in which transmission occurs through droplet infection and aerosols.

Thus, it was obvious to the practice management to equip public spaces with this technology, especially in medical care.

The Soluva units in the practice for internal medicine and cardiology operate at about one third of their maximum capacity in continuous operation. After a particular air load, such as after ultrasound examinations or stress tests, they are switched to maximum air turnover for a short time. All Soluva units are designed in such a way that the efficient UV-C light cannot escape to the outside but remains in the reaction chamber and destroys the viruses.

In everyday life, the low noise level is well accepted by patients and staff. The practice management is convinced: "Of course, UV-C air filtration does not exempt patients from complying with the prescribed hygiene measures, especially not from wearing mouth and nose protection. But we are optimizing infection protection with it."



The renowned Fraunhofer Institute for Building Physics has for the first time confirmed the effectiveness of air disinfection by means of closed UV-C air purification devices under real conditions for a classroom on the basis of an elaborate scientific application test. Heraeus UV-C air purification devices can reduce the virus load in closed rooms by over 99%.

The disinfecting effect of UV-C light has been confirmed in further tests, e.g. with the Hygiene institut biotec or the University Hospital Tübingen.

Advantages of UV-C air purification with Heraeus Soluva equipment:

- ✓ free from chemicals
- ✓ without filter
- ✓ low maintenance requirements
- ✓ without ozone and by-products
- ✓ no uncontrolled escape of UV-C-light
- ✓ no germ resistance formation

