

Virus Disinfection with UV-C Light in the Kindergarten Case study of UV air purification for daycare centers and nurseries

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. Small children and their care givers thus receive additional protection to the usual hygiene measures in daycare centers and nurseries.

Children are curious and move around a lot. So in daycare centers and nurseries, children do not keep a permanent distance from each other or from the caregivers. With toddlers, this is impossible anyway. Therefore, germs and viruses can spread more easily, and strict hygiene must always be maintained. Especially during the Corona pandemic, children and their caregivers must be well protected.

Disinfection has always been important in the kindergarten of the Kathinka Platzhoff Foundation, so far the surfaces have been wiped with disinfectant solutions for this purpose. Wolfgang Zöller (managing director) was looking for ways to clean the indoor air and his choice fell on Soluva equipment. Elisa Reinbacher, kindergarten director informed herself well: "We were convinced that all Soluva devices are designed in such a way that the effective UV-C light cannot get outside, but remains in the reaction chamber and destroys the viruses." The parents of the children in care, who were involved at an early stage, appreciate the additional air purification. UV air purification helps minimize the risk of infection in general, keeping the facility open.



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