

ENVIRONMENTAL IMPACT OF HEALTHCARE DISINFECTION



UV DISINFECTION EXPERT

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Daan Hoek | Co-Founder UV Smart

Beyond Clean UV Disinfection Expert™:

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In the healthcare sector, responsible for 5-9% of global CO₂ emissions, the choice of disinfection methods significantly impacts the environment. Disinfection, crucial for preventing disease transmission, can be achieved through various methods, each with its own environmental and efficacy considerations. Chemical disinfectants, while effective, can degrade equipment and pose health risks to staff. Natural disinfectants are environmentally safer but may be less effective and potentially damaging to equipment. UV-C light offers a sustainable alternative, destroying microorganisms by attacking their DNA/RNA without using harmful chemicals or substantial energy.

A study involving the Reinier de Graaf Hospital compared the ecological footprint of traditional disinfection methods with UV-C light technology. The latter, used near the point of care, required no transportation, thus emitting no CO₂, and consumed no water or chemicals for disinfection. Annually, the UV-C light technology used at Reinier de Graaf Hospital could save the hospital 2,080 gallons of water, 3,686.8 KWh of energy, and 1,723 transportation miles, equating to a saving of 19,180 pounds of CO₂.

UV light technology, while presenting upfront costs and necessitating safe-use training for staff, offers a non-toxic, cost-effective, and sustainable disinfection method, potentially saving significant amounts of CO₂ emissions, water, and chemicals. Healthcare institutions aiming to enhance their disinfection processes and adhere to stringent environmental regulations must consider innovative, effective, and environmentally beneficial options like UV technology, ensuring both disease prevention and sustainability.

Have more UV disinfection questions? Contact Daan at: daan.hoek@uvsmart.nl

Beyond Clean UV Disinfection Expert™ Biography:

DAAN HOEK CO-FOUNDER UV SMART



Daan Hoek is the Co-Founder of UV Smart and very passionate about UV-C light as a disinfecting agent in the medical field. UV Smart is an innovative company based in the Netherlands with an established US office in New York. The UV Smart devices can disinfect medical equipment quickly, efficiently, and consistently by using UV-C light. By refining this ancient technology, UV Smart made it possible to disinfect medical equipment in a rapid and effective way. UV-C light also eliminates the use of chemical disinfectants that are harmful to medical equipment, operators, and our planet, while saving a substantial amount of turnaround time. UV Smart is the front-runner in applying UV-C technology to medical devices. UV Smart is currently active in over 20 countries worldwide.

Daan is also the chairman of the Taskforce UV-C light of the Dutch Normalization Committee. Along with the taskforce, he developed the first European guideline for UV-C disinfection devices in the medical field. He is also in charge of all the clinical (multi-center) studies of UV Smart, three of which are running in the US and in Europe.

If you have any questions regarding UV-C light, feel free to reach out to him!

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