HOW UV TECHNOLOGY CAN PREVENT HAIs & CROSS-CONTAMINATION

UV DISINFECTION EXPERT

BEYOND CLEAN

Daan Hoek | Co-Founder UV Smart

Beyond Clean UV Disinfection Expert ™:

HOW UV TECHNOLOGY CAN PREVENT HAIs & CROSS-CONTAMINATION

Daan Hoek | Co-Founder UV Smart

Hospital-acquired infections (HAIs) and cross-contamination present significant challenges to healthcare systems, posing risks to patient safety and incurring substantial costs. In the U.S., 1 in 25 patients are at risk of acquiring an HAI, with an estimated 72,000 patients dying during hospitalization due to these infections. HAIs, which can include urinary tract infections, surgical site infections, and pneumonia, typically manifest 48 hours post-hospitalization and can spread rapidly, necessitating robust prevention strategies. Cross-contamination, the transfer of infectious organisms between individuals or objects, further exacerbates the issue.

UV-C light, with its antimicrobial properties, emerges as a pivotal tool in combating HAIs and cross-contamination. Operating typically between 200-280nm wavelengths, UV-C light damages the nucleic acids and DNA of exposed microbes, inhibiting cell division and preventing pathogen transmission. Additionally, it can weaken the organisms by altering protein molecules in their cell walls, facilitating easier elimination from surfaces and devices. UV-C light is effective against various pathogens, including bacteria, viruses, and fungi.

In practical applications, UV technology has demonstrated efficacy in reducing HAIs. A study in the American Journal of Infection Control highlighted a 34.2% reduction in HAIs following the implementation of UV-C disinfection in a hospital. Furthermore, innovative UV disinfection products have proven effective in decontaminating medical devices, such as flexible laryngoscopes, offering a faster and more resource-efficient alternative to traditional disinfection methods.

UV technology offers numerous benefits, including its non-chemical, no water, and no consumables nature, sustainability, material harmlessness, efficiency, and resource conservation. In conclusion, while UV technology significantly aids in reducing HAIs and cross-contamination, a multifaceted approach, combining various infection control systems and expert input, is imperative for substantial impact in healthcare settings.

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 an 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!

BEYONDCLEAN