UVC Water Trap Disinfector

Effective reduction of bacteria from wastewater in sink and wash basins.

Water traps are some of the most contaminated areas in hospitals and increasingly recognised as potential vehicles for transmission of multi-drug resistant bacteria to patients, with 7-10% of hospital patients affected by infections (WHO).

Water used for staff hand washing, hygiene of patients or washing devices is contaminated and then drained through the sinks, which are frequently identified as relevant reservoirs of MDR Gram-negative bacteria, including Acinetobacter baumannii, Pseudomonas aeruginosa and ESBL-producing k. oxytoca. Water from the tap creates an aerosol effect from the sink waste, contaminating adjacent surfaces(1)

A study carried out in two adult surgical ICU's of a university affiliated tertiary care hospital, found water fittings, especially the sink water trap act as an important role in sporadic P. aeruginosa transmission in patients. 92.3% of the sink wastes tested positive for a long standing population of P. aeruginosa (2)

The DDC Dolphin UVC Water Trap Disinfector keeps the water in sink waste pipes sanitised, killing bacteria and preventing biofilm formulation.

By preventing the spread of multi-resistant bacteria you reduce the risk of HCAI's which is not only cost-efficient, but also safeguards your clinicians and patients' health.

Benefits

- Eliminates MDR Bacteria such as CPOS, VRE and ESBL producing organisms
- Germ count in water traps can be reduced up to 3-6 log using UVC in the drains
- Prevents Biofilm formation
- Low running costs, as little as 12w per hour with annual replacement of the UVC lamp
- Easy to install and available to fit a large range of sink & wash basin variations
- Clinically tested by Copenhagen University Hospital Rigshospitalet

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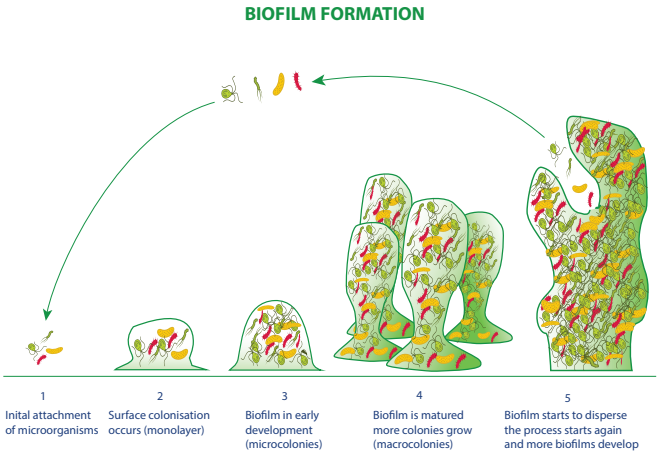
How do Biofilms Form?

A biofilm is a collection of organic and inorganic, living and dead material collected on a surface. It may be a complete film or, more commonly in water systems, in patches on pipe surfaces. Biofilm microbial communities form in thick slimy layers on the inside wall of the water pipe, created by the continual growth of micro-organisms.

Unchecked Biofilm growth poses a real risk to public health. Biofilm formations will harbour a wide range of micro-organisms, including opportunistic respiratory pathogens.



The Technology

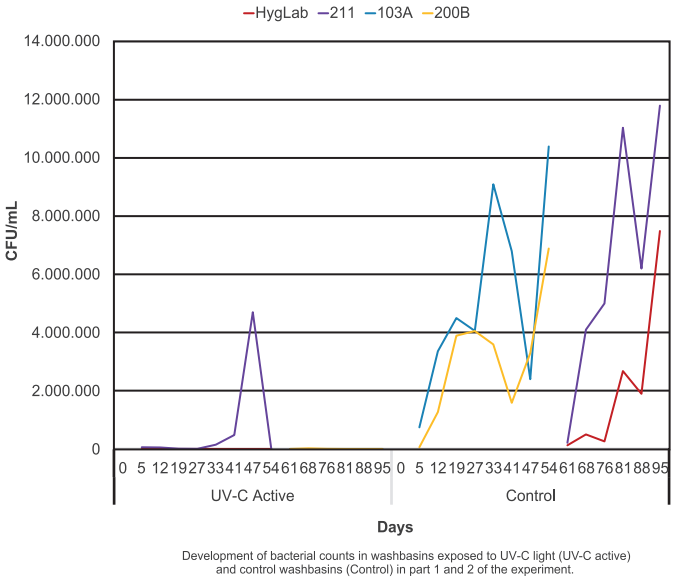
The UVC Lamp contained within the UVC Water Trap Disinfector will target biofilm formation by continuously irradiating the internal surfaces of the water trap, destroying the bacteria, or limiting its ability to colonise and form biofilms.

Clinical Testing

Copenhagen University Hospital

A clinical study was undertaken by Copenhagen University Hospital to evaluate the efficacy of Ultraviolet C (UVC) light to decontaminate water traps. It was concluded that there was a marked reduction in bacteria counts within the first week and a marked difference in bacterial counts was observed between water traps exposed to UVC light and control water traps throughout the experimental period.

Under UVC light exposure Pseudomonas aeruginosa and Gram negative intestinal commensals disappear, while Stenotrophomonas maltophilia is markedly reduced.



Development of bacterial counts in washbasins exposed to UV-C light (UV-C active) and control washbasins (Control) in part 1 and 2 of the experiment.

Copy on request from DDC Dolphin:

(1)Wastewater drainage system as an occult reservoir in a protracted clonal outbreak. Published 2013.

(2)Sources of sporadic Pseudomonas aeruginosa colonisations / infections insurgical ICU's. Published 2016

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