



Case Study: AOT Wallenius for hospital water supply



The project

During a large redevelopment project of a hospital in 2011, building managers were looking for ways to improve water quality with low environmental impact, so chose non-chemical water treatment, AOT Wallenius, installed on the incoming mains.

Despite mains water generally arriving at our buildings in excellent condition and safe to drink, it does occasionally contain low levels of bacteria that can be harmful if they are allowed to multiply. As soon as water is stored in tanks, hot water systems or any pipe work that isn't flowing regularly, this low level of bacteria can grow to higher, more dangerous levels. Many control measures are used to prevent this happening but there is always the chance that harmful bacteria, such as Legionella or Pseudomonas, will be re-introduced via the incoming mains.

Hospitals are constantly looking to keep the water clean and bacteria free but the addition of chemicals is not always desirable – and often costly.



The solution

AOT Wallenius is a patented and recognised alternative to chemical water treatment, providing an ecologically sound, high-tech water purification solution. It has been proven to achieve 99.999% Legionella 'kill rates' and will eliminate almost all bacteria that passes through the reaction chamber.

With extremely low power consumption and minimal maintenance required, the hospital chose to install the units and then monitor the bacterial levels before and after the treatment device, in order to measure the efficacy of Wallenius system.





The outcome

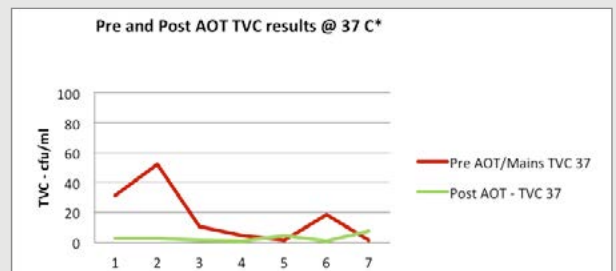
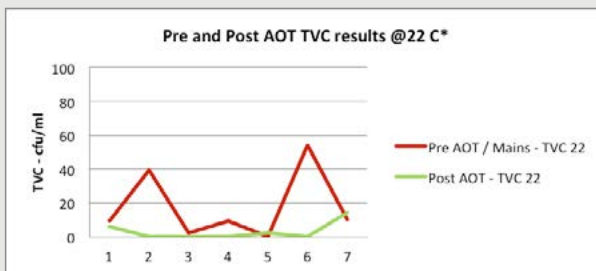
Total Viable Count (TVC) samples were taken for analysis by UKAS accredited laboratories at 22°C and 37°C from the mains water (untreated) before the AOT unit, and the water that was downstream (treated by AOT) from the installation. The results over a 7 month period are shown below:

The results clearly show a consistent reduction in any elevated TVC counts by passing the water through the Wallenius AOT units. There were no Legionella or Pseudomonas counts detected throughout this period – and this included testing throughout the remainder of the water systems in the hospital.

Since the unit was installed and commissioned in 2011, the performance of bacterial control has continued – and, apart from a replacement set of bulbs every 12 months, this has required minimal maintenance intervention by onsite or external operatives.

The water quality and microbiological control remains excellent throughout the building as the Wallenius AOT system continues to perform a constant online disinfection of the incoming water.

- Reduction in elevated TVCs
- No Legionella or Pseudomonas detected
- Minimal maintenance
- Low environmental impact



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