REMOVAL OF AIRBORNE *SERRATIA MARCESCENS* IN A CONTROLLED INDOOR ENVIRONMENT USING MEDIXAIR UV DEVICE

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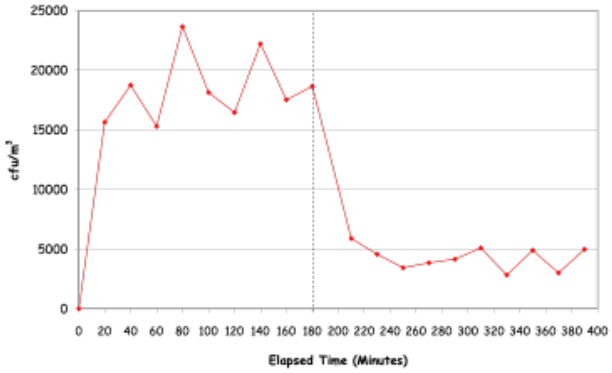
A series of trials were undertaken in order to determine the efficacy of a boxed UV device in the removal of airborne microorganisms (*Serratia marcescens)* from a controlled indoor environment.
The work was undertaken at the University of Leeds in a purpose-built aerosol test chamber.



79% Removal of *Serratia marcescens* at 1.5 AC/hour using two medixair units mounted on the long wall of the room.

The trial was carried out over 6.5 hours during which the microorganisms were nebulised into the room at a constant rate. During the first 3 hours no UV device was used and samples were taken every 20 minutes in order to determine the steady state concentration of the microorganism. After 3 hours the UV device was switched on and allowed to warm up for 30 minutes. Samples were then taken every 20 minutes for another 3 hours to determine the new steady state concentration. The performance of the device in terms of the percentage removal of the microorganism was calculated as the difference between the average concentration before and after.

During all the trials the temperature and relative humidity in the test chamber was recorded every 20 minutes while the samples were being taken

Under low ventilation rates the performance increases dramatically to give very good removals.