

## Filtering efficiency measurements for Desinfinator Aero Pro air purification unit 4.5 – 7.5.2009

Measurements were conducted to determine the filtering efficiency of Aero Pro air purification unit for 4-10  $\mu\text{m}$  aerosol particles. This diameter range covers, for instance, the sizes of mineral dust particles and common fungal spores. Chalk powder and potato flour were used as test aerosols in the measurements, as their sizes and properties are likely to correspond to those of mineral dust and fungal spores. The filtering efficiency measurements were done with variable air flow rates. It was observed that the Aero Pro air purification unit filters 4-10  $\mu\text{m}$  particles very efficiently: over 99% of the particles are removed in the unit. The filtering efficiency increases with increasing particle size, and 50% filtering efficiency was achieved at 2-3  $\mu\text{m}$  when potato flour was used as the test aerosol, and below 1  $\mu\text{m}$  in the case of chalk powder, when flow rates over 17 l/s were used. Additionally, Aero Pro removes over 97% of the total number of < 1  $\mu\text{m}$  particles, regardless of the flow rate.

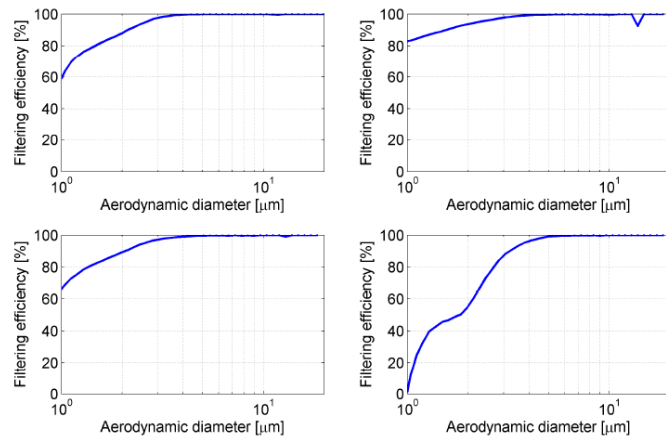


Figure 1: The filtering efficiencies for chalk powder aerosol. Volumetric flow rates: 25, 22, 17

