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# AirDoctor 3000 Against Airborne Virus Aerosols

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The strain of Influenza A used in the testing was an H1N1 subtype. Influenza types A and B are responsible for epidemics of respiratory illness that are often associated with increased rates of hospitalization and death. The main differences between them are differences in the two surface proteins HA and NA, which give rise to different subtypes. In the case of influenza type A viruses, 16 HA subtypes and 9 NA subtypes have been identified. During the 20th century, the only influenza A subtypes that circulated extensively in humans were A(H1N1) Spanish Flu; A(H1N2); A(H2N2) Asian Flu; and A(H3N2) Hong Kong Flu. A new strain of influenza A, H1N1 emerged in 2009 called 'Swine Flu' as it originated in swine and spread to humans. More recently in 2013, a new strain of Avian Influenza A, H7N9 has infected people in China and is believed to be from exposure to infected poultry.

## Test

The testing involved aerosolising living virus specimens into a 30m<sup>3</sup> environmental test chambers under controlled conditions. The virus was introduced over a period of time with a ceiling fan operating to achieve steady-state conditions and ensure a homogeneous mixture of virus particles within the chamber. The environment temperature was between 23 and 25 degrees Celcius with between 50 and 60 percent humidity. Three replicates were collected by biosamplers at each sample time point. At the end of the test, the samples were removed and transferred to a virology laboratory for analysis.

## Results

The testing demonstrated that the AirDoctor air cleaner was extremely effective in reducing airborne concentrations of Influenza A aerosol in the test chamber, reaching 99.99% airborne virus reduction.