

British Government's Health Protection Agency Tests IQAir® Cleanroom Series

Following independent tests carried out by the British Government's Health Protection Agency at Porton Down, United Kingdom, where an IQAir Cleanroom system with HyperHEPA® filter was challenged with four different microorganisms, results have shown percentage efficiencies in excess of 99.52%.

The microorganisms used for the tests were *Brevundimonas diminuta* NCIMB 11091, MS-2 coliphage NCIMB 10108, *Bacillus subtilis* var niger NCTC 10073 and *Staphylococcus epidermidis* NCIMB 12721. The percentage efficiencies recorded are as follows:

Micro-organism	Size	Percentage efficiency		
		Run 1	Run 2	Run 3
<i>Brev. diminuta</i> NCIMB 11091	Gram negative, rod, 0.3 x 0.8 microns	99.923	99.846	99.870
MS-2 coliphage NCIMB 10108	MS2, model virus, 23nm diameter	99.665	99.604	99.524
<i>B. subtilis</i> var niger NCTC 10073	Gram positive, spore, 1.1 x 0.6 microns	99.687	99.690	99.697
<i>Staph. epidermidis</i> NCIMB 12721	Gram positive, cocci, ca. 0.6 microns diameter	99.879	99.886	99.870

The environmental room in which the tests were carried out measured 3m x 3m x 2m high and was fitted with a filtered extract and supply ventilation system and remotely controlled high-pressure airlines and electrical supplies that were used to control the nebuliser and samplers respectively.

The downstream sample was taken from the outflow duct and the challenge sample was taken from directly before the filter via a sample port added to the inflow duct. This procedure was carried out for each of the four microorganisms. The downstream sample was carried out in triplicate and the challenge sample was carried out once.

The Health Protection Agency result confirms the value of IQAir portable filtration systems in meeting or assisting traditional methods of infection control in critical indoor environments. The mobile nature of the system provides a short response time to epidemics or emergencies and units may be connected to special ducting to provide positive or negative pressure environments in order to isolate airborne microorganisms or isolate immuno-compromised patients. As installation is minimal, interruption to daily routine is obviated.

Manufactured in Switzerland, the IQAir unit is the only portable air filtration system to have been type-tested in accordance with the world's most stringent HEPA filter test norm (EN1822). Each unit is individually tested and certified, not only for the filter efficiency, but also for the integrity of the housing and the quality of the air delivered.

Sophisticated control features include a five-speed fan setting with LCD display of air delivery rate and a microchip-controlled filter-life monitor that calculates when it is time to change taking actual use and filter contamination levels into account. An integrated timer and remote control handset are also included.

IQAir systems are manufactured in Switzerland by INCEN AG.

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