



**Fig. 1:** “Bacoban for Aerospace” has especially been developed to protect aircraft interiors (T. Bader)

## “Bacoban for Aerospace”: Disinfectant for aircraft interiors

*Conventional disinfectants have a limited duration of active infection control, and reduction of infectious foci has become an important task lately. However, a problem arises using conventional disinfectants. Although these are effective immediately, the effect is short-lived. The microorganisms are killed for only a few minutes during the continuous exposure. Then, the disinfectant evaporates and when it has, the previously treated area is again exposed to microbial infection. Therein lies the danger of re-infection. Until the next disinfection occurs, there is a hygiene gap in which there may be a new settlement of micro-organisms and pathogens. “Bacoban for Aerospace” fills this gap, as it has been developed not only to protect medical environments such as hospitals and surgeries (class 2 medical product), but also aircraft interiors.*

“Bacoban for Aerospace” is a long-term, anti-viral, anti-bacterial and anti-fungal nano-thin coating, which can be applied to any surface via spray or wipe. Unlike most surface protection products, which once applied only last minutes, “Bacoban for Aerospace” remains active for up to 10 days after application and is resistant to the most common germs and viruses including MRSA, HIV, hepatitis B & C and norovirus. Bacoban is a water-based surface disinfectant that contains a polycondensate, a quaternary ammonium compound and sodium pyrrhione. The disinfectant is free from aldehydes and phenol. It is available exclusively from Frasers Aerospace.

Bacoban disinfection and cleaning of various areas and aircraft is in accordance with European Medical Devices Directive 93/42/EEC and all types of surfaces in hospitals, doctors’ practices, rehabilitation centres and old people’s homes. It is especially useful in areas demanding effective and long-lasting hygiene and particularly suitable for areas where unpleasant odours, caused by microorganisms form, such as toilets and sanitary facilities.

“Bacoban for Aerospace” is microbiologically effective against bacteria, fungi, hepatitis B and C viruses, HIV, influenza virus, including H5N1, rotaviruses and adenoviruses. The solution (100 g) is composed of benzalkonium

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chloride (26 g), sodium pyrithione (2.5 g), polycondensates, perfume substances and purified water. It has also been tested in accordance with German DGHM (Deutsche Gesellschaft für Hygiene und Mikrobiologie) guidelines for high organic load (see Table 1).

### Recent case study

Over the last 18 months, Pauline Bradshaw, who is the Associate Director, Infection Prevention and Control at Alder Hey Children's Hospital (UK), has been trialling the product. In essence, this technology allows the user to coat almost any object with a layer of invisible, durable anti-pathogen glass, which is 500 times thinner than a human hair. Pauline found that the Alder Hey trials confirmed that it created easy-to-clean-surfaces, which significantly reduced contamination.

Double blind trials have proven the efficacy of the technology. The coating procedure is very straightforward – it is a matter of wiping it with a tissue that is impregnated with the product. The procedure takes two minutes and then the item becomes protected for the next 10 days. During "Infection Control Week" at Alder Hey, staff with stethoscopes, pagers and mobile phones were given the opportunity of having the coating applied to them. Pauline Bradshaw went on to note "having evaluated the ease with which the items are coated, we are now go-

Effectiveness	5 min	15 min	240 min
Tested in accordance with DGHM guidelines:	2 %	1,5 %	
Limited virucidal effect (according to RKI/DVV recommendations), incl. HBV, HCV, HIV, influenza, BVDV and vaccinia	1 %		
Rotaviruses	0,1 %		
Adenoviruses			2 %

**Table 1:** Tested in accordance with DGHM

Effectiveness	5 min	15 min
DIN EN 1040	0,25 %	
DIN EN 1275	0,25 %	
DIN EN 1276	0,75 %	0,5 %
DIN EN 1650	0,5 %	0,25 %
DIN EN 13697		0,5 %

**Table 2:** Tests\* in accordance with EN guidelines

\*Long-lasting antimicrobial and virus-inactivating effect for up to 10 days, tested according to ASTM E 2180.

ing to examine the possibility of providing the product to doctors and nurses who can use to protect their phones and stethoscopes on a regular basis. We are of course always examining ways in which to enhance infection control." Pauline and the team are keen to continue this work by using a cohort of staff and following them for a week post coating and testing the phones, stethoscopes and pagers for levels of contamination using ATP testing, a well recognised marker for cleanliness.



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