

Bacoban®: The new dimension in infection control

Bacoban®

**Closes your
hygiene gap**



Special products for health, care and prevention GmbH

Adexano



Effectivity tests

Disinfecting effect

Tested effect against bacteria and fungi (DIN EN ISO 1275 and DIN EN ISO 1276; listed by the German Society for Hygiene and Microbiology (DGHM/VAH)

Tested effect against enveloped viruses like Hepatitis (e.g. B and C), HIV, Influenza, Herpes, BVDV, Vaccinia. Approved by the German Society for Prevention of Virus disease (DVV).

Long-term anti-microbial effect

Long-term antimicrobial (fungus and bacteria) effect for 3 days (proof no. 5155084) and 5 and 10 days (proof no. 5178969).

Tests were made by Fresenius Institut GmbH, Taunusstein, according to ASTM standard E 2180.

Long-term antiviral effect (e.g. BVDV, Influenza) up to 10 days (proof no. S05ML300). Tests were made by Mikrolab GmbH a DVV (German Society for Prevention of Virus disease) approved Laboratory, according to ASTM standard E 2180.

Bio-compatibility (Dermal irritation and sensitisation)

The bio-compatibility was proven by Bioservice Scientific Laboratories GmbH, Germany, under GLP conditions (DIN EN ISO 10993-1).

Easy-to-clean effect

The easy-to-clean effect was tested and confirmed by the SGS Fresenius Institut GmbH, Taunusstein.

CE certification

Production under internationally recognised, certified conditions.



Bacoban®: effective against

Gram-positive bacteria

Staphylococcus aureus,
Staphylococcus epidermidis,
Staphylococcus saprophyticus,
Streptococcus pneumoniae,
Streptococcus pyogenes,
Enterococcus faecalis,
Corynebacterium diphtheriae,
Listeria monocytogenes,

Vegetative cells

Bacillus anthracis,
Bacillus cereus,
Clostridium botulinum,
Clostridium difficile,
Clostridium perfringens
und Clostridium tetani,

Gram-negative bacteria

Escherichia coli,
Pseudomonas aeruginosa,
Klebsiella pneumoniae,
Salmonella enteritidis,
Salmonella typhi,
Shigella dysenteriae,
Legionella pneumophila,
Proteus mirabilis,
Neisseria meningitidis,
Neisseria gonorrhoeae,
Enterobacter cloacae,
Bordetella pertussis,
Haemophilus influenzae,
Yersinia pestis,

Fungus e.g.

Aspergillus niger,
Candida albicans,
Cryptococcus neoformans,

Viruses e.g.

Avian influenza virus (bird flu)
HIV
Hepatitis B virus
Hepatitis C virus
Vaccinia virus
BVDV
SARS virus
Herpes virus
Ebola virus
Lassa virus
Measles virus
Mumps virus
Rubella virus (German measles)

The situation

The number of infections by micro-organisms, especially in the hospital area, has grown tremendously. This is why infection control and reduction of the infection foci have become a special challenge. Up to 800,000 patients become ill every year with nosocomial infections in German hospitals alone. About 50,000 patients die from the results. In addition, there has been a large increase in MRSA infections, from 1.7% in 1990 up to more than 20% now. An MRSA rate of 50% is assumed in countries such as Japan, USA, England, Spain and France.

A problem which is increasing all over the world.

Problematic germs are being detected in old people's homes and in private households in the meantime as well.



Globalisation ensures a quick distribution of problematic germs.

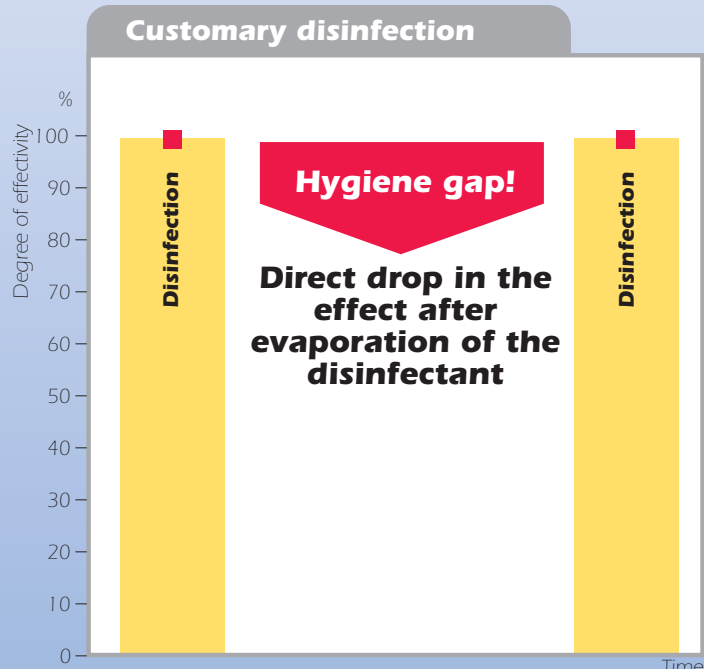


The problem

Conventional disinfectants are effective immediately - but only for a short period.

Micro-organisms are only killed during the few minutes of the duration of the active period. After that, when the disinfectant has evaporated, the area treated is again subjected to microbial strains.

Until the next disinfection, a hygiene gap results, in which there can be a repeated settlement by micro-organisms. How can this problem be counteracted?



Time

The solution: the new dimension of infection control

Bacoban®:

A multifunctional disinfectant on the basis of chemical nano-technology

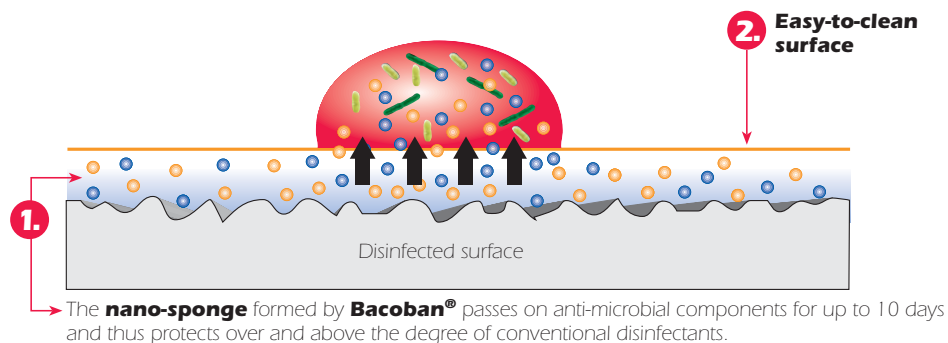
Alongside the proven direct germicidal and virucidal effect, Bacoban® also has **two further highly effective mechanisms:**

1. Anti-microbial effect for up to 10 days
(bactericidal, fungicidal)

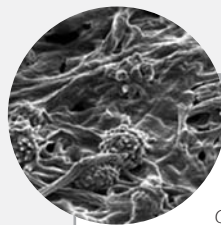
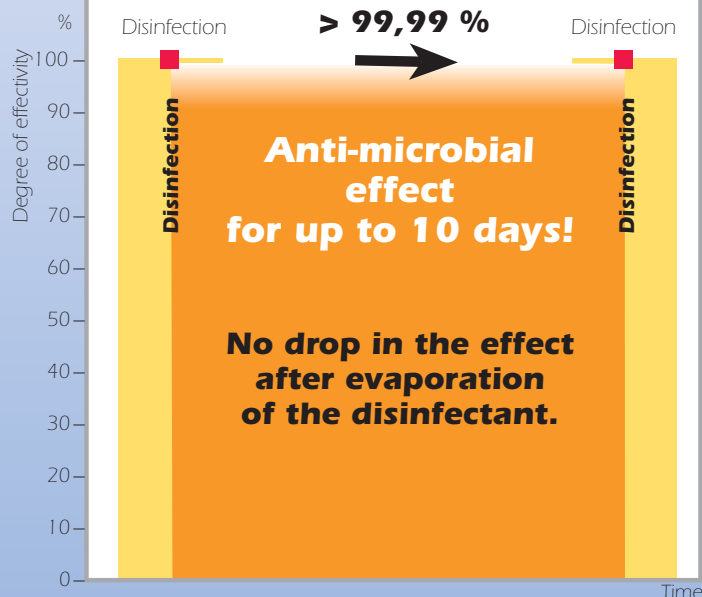
After evaporation of the disinfectant, **Bacoban®** forms a nano-sponge and stores biocides, which diffuse in the event of contamination/settlement onto the surface and kill the bacteria and fungi - for up to 10 days

2. Easy-to-clean surface: reduction of the cleaning requirements by more than 50%

The **nano-sponge** additionally establishes an easy-to-clean surface, which reduces the cleaning necessary by more than 50%.



Disinfection with Bacoban®



Bio-films: stable communities of life on a microscopic level

Resistant bio-films form in about 1-2 hours, depending on the existence of the source of nourishment. The slime formed by the micro-organisms protects the individual cells against external effects, amongst other things against cleaning and disinfecting agents. In nature, bio-films are needed to maintain equilibrium. In the health sector, bio-films of possible carriers of infections become a risk which must be removed immediately.

Biocides

Biocides are effective agents and preparations which are intended to destroy noxious organisms in a chemical or biological way, to prevent damage being caused by them or to combat them in any other way. Noxious organisms can be both animal forms of life and plants as well as micro-organisms including fungi and viruses.

Effectivity

Results according to ASTM E 2180: the assessment was done in comparison of an untreated ceramic test surface with one treated with **Bacoban®**.



Long-term antibacterial effect: up to 10 days!

Time between applications and ASTM-Test (Δt)	3 days		5 days		10 days	
	0,5 h	24 h	0,5 h	24 h	0,5 h	24 h
Escherichia Coli	> 99,997 %	> 99,997 %	99,694 %	> 99,994 %	97,609 %	> 99,996 %
Pseudomonas aeruginosa	> 99,996 %	> 99,996 %	99,968 %	> 99,995 %	95,294 %	> 99,997 %
Staphylococcus aureus	99,997 %	> 99,997 %	> 99,996 %	> 99,996 %	> 94,545 %	> 99,995 %
Candida albicans	99,636 %	> 99,997 %	- (n.r.)*	> 99,992 %	- (n.r.)*	> 99,997 %
Aspergillus niger	99,557 %	> 99,995 %	8,333 %	> 99,992 %	98,628 %	> 99,837 %

* no reduction (Complies to ASTM E 2180, tested by Fresenius Institute, Germany)

The **anti-microbial effect was confirmed** as follows at the 3, 5 and 10-day times:

3 days

- Strong bactericidal effect against *Escherichia coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus*
- Strong fungicidal effect against *Aspergillus niger* and *Candida albicans*

5 days

- Strong bactericidal effect against *Escherichia coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus*
- Strong fungicidal effect against *Aspergillus niger* and *Candida albicans*

10 days

- Strong bactericidal effect against *Escherichia coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus*
- Strong fungicidal effect against *Candida albicans*
- Significant fungicidal effect against *Aspergillus niger*

Proof of the easy-to-clean property



The surface treated with **Bacoban®** shows dissolution of dirt after as little as 1 to 2 removals. After 6-7 removals, the dirt is almost completely dissolved.

On the untreated surface, an even amount of dirt per removal can be seen. After more than 8 removals, there was still 60% of the dirt to be seen on the tiles.



Bacoban® inhibits formation of smells

Due to the bactericidal effect of **Bacoban®**, the formation of smell-intensive materials caused by bacteria such as ammonia (sanitary area) is distinctly reduced.

What does "nano" mean?

The prefix "nano" comes from Greek and means something along the lines of "dwarf-like". A nanometer is one billionth of a metre, the dimension of which can be shown most easily on the basis of a comparison. A nano-particle is in the same relationship to a football as a football is to the earth.

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Bacoban is available in:

Spray bottle	1,000 ml
Spray bottle	500 ml
Pump bottle	250 ml
Pump bottle	125 ml
Canister	5,000 ml



Ingredients:

100 g solution contain: Ethanol 49.4 g, Isopropanol 7.1 g, Benzalkonium chloride 0.71 g, Sodium pyrithion 0.05 g, Polycondensates, fragrances, purified water. Do not mix with other solutions! Does not contain formaldehyde. Does not contain phenols.

Purpose of Use:

Ready-to-use solution for disinfection (75 % ready-to-use solution according to DGHM): for alcohol-resistant surfaces, inventory of clinics, medical offices and homes (e.g. applicable to patient chairs, work benches in the laboratory or work tops of medical practices, sanitary facilities, monitors, examination tables etc.).

Efficacy and Application:

Wide range of microbiological action, according to DGHM within 5 minutes in cases of high and low contamination, against bacteria and fungi, as well as virucidal action against **viruses** e.g. Hepatitis B, Hepatitis C, HIV, Influenza, Herpes, BVDV, Vaccinia within 30 seconds („limited virucidal action“ according to DVV).

Broad-spectrum, swift acting, long-term antimicrobial effect (up to 10 days) against **bacteria** (e.g.

Staphylococcus aureus, *Pseudomonas aeruginosa*, *Escherichia coli*) and **fungi** (e.g. *Aspergillus niger*, *Candida albicans*). Complies with the internationally acknowledged ASTM E 2180 test. Certified biocompatibility according to DIN EN ISO 10993-1.

Application:

Moisten surface from a distance of approx. 30 cm using about 50 ml (max. 80 ml) **Bacoban®** per m², disperse with a cloth and let dry.

Safety Notice:

Provide sufficient ventilation during disinfection procedure. Keep away from ignition sources. Wear gloves while working. Do not swallow or inhale. Avoid eye contact. In case of contact with eyes or mucous membranes, rinse with plenty of water and consult a physician.

Can be applied to all alcohol-resistant surfaces. In case of sensitive surfaces, we recommend to test resistance by applying **Bacoban®** to an inconspicuous exemplary area.

Store in closed container only. Container can only be recycled when completely emptied. Do not use after shelf life has expired. Discard properly by observing the local and official regulations.

Important Notice!

The long-lasting antimicrobial effect of Bacoban® must not lead to omit disinfection in cases of evident and/or potential contaminations !

UBA No: 5704 0002
Biocide Reg. No: I-51432

Use disinfectants safely. Always read label and product information before use.

Manufacturer: sarastro GmbH, D-66287 Quierschied

Application

For the primary set-up of the easy-to-clean effect, thorough cleaning of the surface to be treated is necessary beforehand. After that, apply **Bacoban®** (max. 80 ml/m²) and distribute with a cloth/paper towel.

To form the first nano-layer, the material should ideally react overnight, in any case for no less than 6-8 hours. In each wiping disinfection with **Bacoban®** the acting time is 5 minutes (according to DGHM). The easy-to-clean layer establishes itself independently after that. Used regularly, a layer in a nanometer range builds up.

This technique of surface refinement by the set-up of molecular networks ensures that micro-organisms, dust, protein and sweat only adhere loosely to the molecular network. They can now be removed with less cleaning efforts.



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