

Biomaster

Product protection for personal care

Harmful microbes can hitch a ride on just about any surface. Personal care products can become a perfect home for bacteria and fungi leading to negative health outcomes.

Your personal care and beauty products are designed to make you look good and keep you clean, but you could also be sharing them with harmful bacteria.

- The average toothbrush contains about ten million germs, including a high percentage of potentially fatal bacteria such as staphylococci, streptococcus, E. coli and candida.¹
- Makeup bags and toiletry bags are a breeding ground for bacteria. In tests, 11 out of 25 bags contained Staphylococcus aureus - a common cause of skin infections and food poisoning, Pseudomonas aeruginosa, which can trigger bloodstream infections and pneumonia and E-coli.²
- Flushing toilets can result in airborne particles of faeces making their way onto any item that isn't stored inside a medicine cabinet.³
- The hand-towel hanging next to your bathroom sink is a reservoir of bacteria. Towels are made to absorb water, which is great for drying your skin, but also

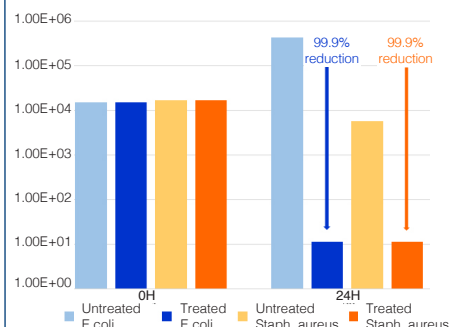
ideal for bacterial incubation. You should wash all towels including the one you grab after showering after two days of use.³

- Shared razors put you at high risk of bacterial infection, most commonly Staphylococcus aureus, manifesting as a painful rash or boil. If your razor remains wet or if you don't wash it properly after using it there is also a high chance that it will harbour microbes that cause fungal or yeast infection.⁴
- A single hair follicle can hold 50,000 bacteria and your hairbrush can contribute to this. Brushes also collect residues of hair products which can become sticky and attract dirt. Diseases such as impetigo can spread from one person to another by sharing a brush.⁵
- Mould and fungal infections can flourish in shoes and trainers, particularly as they are often stored in a warm, dark environment such as a wardrobe or cupboard under the stairs. A recent study found 100 times more mould in old shoes than in a toilet bowl.⁶



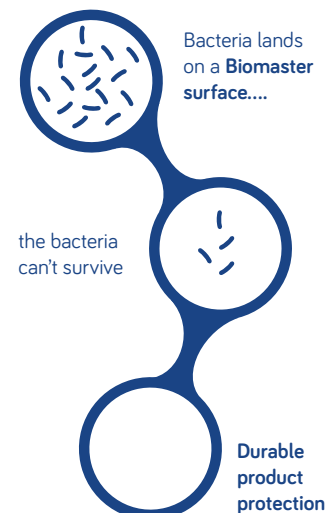
How effective is Biomaster?

In typical tests, after 24 hours surfaces treated with Biomaster showed a reduction in the levels of E.coli and Staphylococcus aureus by over 99% achieving ISO 22196:2011.



ISO 22196 results comparing bacterial load on an untreated surface with a Biomaster protected surface

How does Biomaster work?



Our solution: 24/7 antimicrobial product protection

Biomaster technology interrupts and inhibits the growth of harmful bacteria, providing product protection around the clock.

- Biomaster can be introduced into almost any item found around the home offering product protection resulting in fewer bacteria on surfaces.
- The active antimicrobial agent is built into the product during the manufacturing process, so the protection lasts for the

useful lifetime of the treated article.

- The active ingredient in Biomaster only imparts antimicrobial properties and does not affect the basic colour or surface finish of any product in which it is used.
- Independently tested in thousands of applications, Biomaster is proven to inhibit the growth of most types of harmful bacteria found in personal care products.

^{1 & 3} Dr. Charles Gerba, University of Arizona environmental microbiologist

² Dr Anjali Mahto, consultant dermatologist at the Cadogan Clinic.

^{4 & 5} Dr Andrew Wright, consultant dermatologist with Bradford Hospitals NHS Foundation Trust.

⁶ Dr. Mike O'Neill, a consultant podiatrist at the Princess Grace Hospital, London and spokesman for

Biomaster

Product protection for personal care

Antimicrobial technology can play an important role in making sure that personal care products are free of harmful micro-organisms. Here are a few examples of how Biomaster is offering round the clock product protection for personal care.



Dental care



Interdental brushes with Biomaster protection inhibits the growth of harmful bacteria that could be present on the brush. Every brush also has an anti-

bacterial cap to produce a more hygienic zone around the brush head.

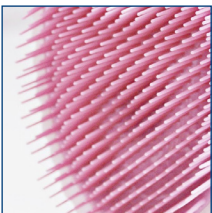
Fabric spray & wash



Biomaster Hygiene Control fabric wash and fabric spray reduce the microbial load, bacterial and viral, on fabrics including hand and bath towels.

The Hygiene Control range not only inhibits the growth of infectious microorganisms including Norovirus, they also help fabrics smell fresher and more hygienic for longer.

Hair brushes



Hairbrushes are a perfect breeding grounds for germs. Biomaster worked with a celebrity stylist to create a brush that not only de-tangles hair and looks good,

but has the added benefit of antibacterial protection.

The result is much safer to use than any other hairbrush on the market and the antibacterial protection works 24/7 for the lifetime of the product.

Mouthguards



Mouthguards with Biomaster antimicrobial protection added to the mouthguard and case keep your mouth protected when playing sport and

also inhibit the growth of harmful bacteria on mouthguard surfaces.

They are currently used by some of the world's best known athletes and by school and club organisation to cater for sports players of any age.

Nail brushes

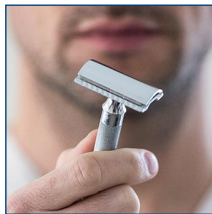


Bacteria can hide underneath fingernails and when cleaned with a traditional brush using soap and water the germs are spread in the water droplets over

the sink, walls and taps.

Biomaster antimicrobial technology keeps the nail brush bristles cleaner and improves hand hygiene.

Razors



Sharp blades in close contact with skin leave you susceptible to infection, especially if your razor hasn't been kept clean and dry. Razors collect

bacteria sitting on the skin, then are often left in a wet shower or sink where they can breed more germs. Biomaster will inhibit the growth of common types of microbes on the razor's surface, reducing the risk of skin infections including folliculitis.

Soap dispensers



Frequently handled liquid soap dispensers can spread Norovirus as well as faecal bacteria such as E.coli.

Dispensers with inbuilt Biomaster technology reduce the risk of cross-contamination for the useful lifetime of the product.

Skincare



Biomaster has worked with a pioneer in health and wellness technology to create new devices that are revolutionising home beauty

routines.

Daily cleansing brushes uniquely protected with antimicrobial technology are proven to reduce the growth of bacteria that can form on brushes between use, so the skin always gets the best treatment, especially if it is prone to unwanted breakouts.

Wash bags



Wash bags and travel toiletry bags often contain moisture and provide an ideal breeding ground for harmful bacteria.

Wash bags and toiletry bags with an inner lining coated with Biomaster technology inhibit the growth of bacteria and help the bag stay smelling fresh for longer.