

Biomaster

Product protection in the home

Home is where the heart is: it's also where the germs lurk. The household items we encounter every day can harbour dangerous bacteria if we don't clean them regularly.



Bacteria are, of course, all around us. Many of them are essential and harmless, but there are also those that can cause us to become ill and they live in some unexpected places.

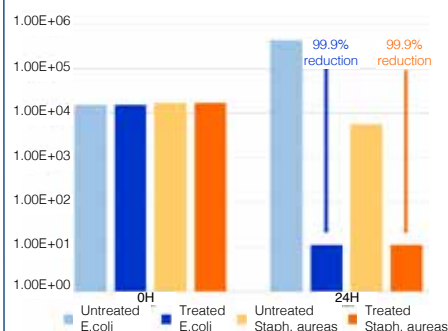
- Kitchens harbour more bacteria than any other room in the house. The average chopping board is home to 50 times more bacteria than a toilet seat. That's because while people perceive toilet seats as needing regular cleaning, the same approach isn't applied to other kitchen items.¹
- Disinfectant sprays and wipes are very effective at removing bacteria, but most people don't realise that they are only effective for a couple of hours. Any bacteria living on the surface after that time can double every 20 minutes.
- In tests, 1 million E. coli cells, known to cause diarrhoeal infection, survived 48 hours on a kitchen surface before becoming undetectable – enough time to cause illness.²
- Staphylococcus aureus can also cause illness and can survive for up to 8

weeks on a household surface. It takes up to 16 weeks to disappear completely.³

- In 2011, food safety researchers in the US discovered that 51% of reusable shopping bags contained harmful bacteria. Once transferred from the fridge onto surfaces, utensils or hands, it can be spread to kitchen surfaces and directly on to ready-to-eat foods.⁴
- Kitchen cloths are one of the dirtiest items in the home, containing harmful bacteria which can be spread when cleaning.
- The average toothbrush contains about ten million germs, including a high percentage of potentially fatal bacteria such as staphylococci, streptococcus, and E. coli.⁵
- A single hair follicle can hold 50,000 germs and your hairbrush can contribute to this. Brushes can collect residues of hair products which can become sticky and attract dirt.⁶
- Failure to wash bedding regularly or at a high enough temperature increases the risk of spreading bacteria. Only one third of us wash our bedding every week.⁷

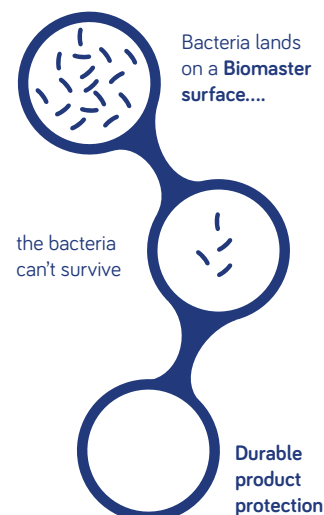
How effective is Biomaster?

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

It is impossible to keep every surface in the home clean all of the time, but Biomaster interrupts and inhibits the growth of harmful bacteria 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 the home.

¹ NSF International Public Health & Safety Org.
^{2 & 3} Professor Anthony Hilton, Head of Biological & Biomedical Sciences, Aston University
⁴ J. Click & J. Wright, University of Pennsylvania
⁵ Manchester University study

⁶ Dr Andrew Wright, consultant dermatologist with Bradford Hospitals NHS Foundation Trust.
⁷ Professor Sally Bloomfield, London School of Hygiene & Tropical Medicine

Biomaster

Product protection in the home

Biomaster can easily be introduced into almost any domestic product, dramatically reducing the amount of microbes found on surfaces. Here are a few examples of how Biomaster is offering round the clock product protection in the home.

Bathroom accessories



Bathroom surfaces harbour many types of harmful bacteria that can easily be spread by hand contact. Biomaster technology is used in **bin liners**

and **waste collection bags** to inhibit bacterial growth where contact is made with the liner whilst neutralising any unpleasant smells.

A range of scented **toilet fresheners** with Biomaster also has an antimicrobial plastic cage providing a protective shield for the lifetime of the product.

Cleaning cloths



Standard **microfibre cloths** are good for collecting debris but they can also provide ideal growing conditions for bacteria.

Biomaster protected cleaning cloths from our Hygiene Control range are treated with antibacterial technology designed to inhibit the growth of common household bacteria.

Fabric spray & wash



Biomaster Hygiene Control **fabric wash** and **fabric spray** reduce the microbial load, bacterial and viral, in all types of soft furnishings and

fabrics.

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.

Fixtures and fittings



handles, push plates and window safety catches.

Antibacterial coatings can be applied to just about any fixture or fitting including finishes for **door and window frames, door handles, pull handles, pull**

Food preparation



the growth of harmful microbes.

Cling film, foil and bakery parchment are available in **dispenser cartons** with an inbuilt Biomaster antimicrobial protective coating designed to inhibit

These dispensers provide a "clean to touch" surface helping prevent cross-contamination of bacteria from hand to carton and from carton back to hand.

Biomaster Protected **kitchen knives** are designed to solve the problems of user ergonomics, hygiene and safety.

Biomaster protected waterproof **thermometers** can test the true temperature of a product in just three seconds. Biomaster is also incorporated in the thermometer casings ensuring lifelong protection against bacterial cross contamination.

Kitchen storage and work surfaces



bacteria. They are extremely versatile and ideal for **kitchen cabinets** and **worktops**.

Biomaster can be introduced into just about any work surface.

Multi-purpose antibacterial sheet materials are also resistant to most types of common

Paint and coatings



Biomaster is easily incorporated into any water, solvent or oil based paint or varnish to provide long lasting and effective antimicrobial protection.

Wall and ceiling paints with inbuilt Biomaster protection inhibits the growth of bacteria and can be washed and scrubbed as part of regular cleaning regimes.

Pull cords



Pull cords in bathrooms and toilets are a known infection risk. Biomaster Protected pullcords have a durable wipe clean coating impregnated with antimicrobial technology working

24/7 against bacteria to reduce the risk of cross contamination.

Shower systems



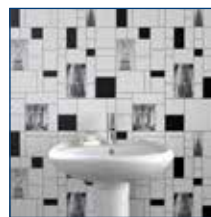
Any environment that is warm and moist is an ideal place for bacteria to breed and establish themselves.

There are currently over 60 types and

styles of **shower tray** incorporating Biomaster antibacterial technology.

Antimicrobial shower heads also cut the risk of the growth and spread of harmful bacteria.

Wallcoverings



Antibacterial **wallpaper** is ideal for damp or humid environments, such as bathrooms or kitchens where mould growth and water damage is likely.

Biomaster Protected **wallcoverings** in a range of different styles and material help prevent the growth of mould and fungi and provide long lasting product protection against household bacteria such as E.coli, Listeria and Salmonella.