

Covid-19: can Biomaster help?

We have received many questions from customers and end-users about the efficacy of Biomaster technology against viruses in general and its potential use against the spread of Covid-19.

Covid-19 is an enveloped virus and relies on a protective lipid coating. These are the easiest types of virus to deactivate. Unlike many gastrointestinal viruses such as Norovirus which have a tough protein shell called a capsid enveloped virus, viruses with this lipid coating are relatively vulnerable and easier to destroy.

There are several methods available to destroy the lipid coating.

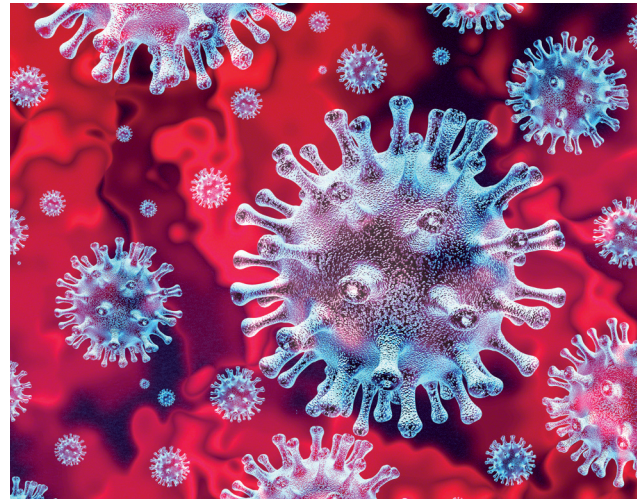
- Alcohol-based products disintegrate the protective lipids.
- Quaternary ammonium disinfectants, commonly used in healthcare and food-service industries, attack protein and lipid structures, thwarting the pathogen's typical mode of infection.
- Bleach and other potent oxidizers will also break down the essential components of a virus.

These methods are highly effective at removing dangerous pathogens from surfaces, but they only remain effective for up to two hours maximum. Any new microbes landing on the surface after that will continue to thrive.

Biomaster and viruses

Biomaster antimicrobial technology is primarily effective against bacteria but is also highly effective against the growth and proliferation of viruses on porous surfaces such as textiles and paper.

When microbes land on an untreated fabric or surface they multiply. When they land on the surface of a Biomaster protected fabric or paper, the silver ions trapped in the surface prevent microbial growth.

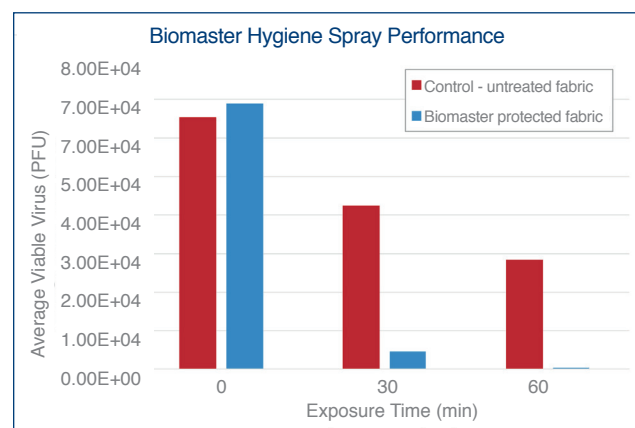


Biomaster antimicrobial technology has been proven effective at reducing the viability of Norovirus on porous surfaces including treated fabrics and papers.

In independent laboratory tests analysis identified that Biomaster fabric spray is effective at reducing the viability of Norovirus applied to textiles.*

The effects of the spray on the virus was measured after 5 minutes, 30 minutes and one hour.

The outcome was a virucidal effect on the test virus by 93% in half an hour, and 99% within an hour.



The evidence proves the efficacy of Biomaster fabric spray in the reduction of microbial load in fabrics, both bacterial and viral, reducing risk to all types of fabrics.

* Full test results available on request

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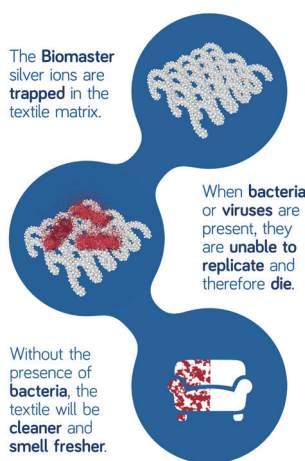
Could Biomaster technology help against Covid-19?

Biomaster has yet to be tested against Covid-19 on product surfaces and currently there is no method available by which it could be tested.

Although we do not yet have any data the microbiology firmly suggests that if Biomaster is effective against Norovirus on porous surfaces, then the active agent is also likely to have an effect on the lipid coating and the essential components required for Covid-19 to function and invade a host.

Unlike alcohol-based gels, disinfectants and oxidisers, Biomaster antimicrobial technology is effective 24/7 for the lifetime of the treated article. Biomaster could therefore complement current hygiene guidance offering additional product protection.

Biomaster antimicrobial technology is highly effective against viruses on porous surfaces.



Biomaster in textiles

Biomaster can be added to any textile or fabric at any stage of production and it will significantly reduce the microbial load without affecting the characteristics of the material.

It can be incorporated during the manufacturing process or as a topical treatment.

We have also developed a surface spray and laundry wash designed to provide a cost-effective method of reducing cross infection, ideal for use in applications where control of hygiene is paramount, including hospitals, care homes, hotels, hospitality venues and catering establishments and should be used in conjunction with existing cleaning regimes.

Bourne Leisure, one of the largest providers of holidays at parks, resorts and hotels across the UK, tested the benefits of Biomaster fabric spray on soft furnishings and fabrics to help reduce the spread of harmful bacteria and viruses on seating in a high usage public

area of Alvaston Hall, Nantwich. An independent analysis of treated fabric samples identified that the fabric spray was highly effective at reducing the viability of Norovirus.*

Biomaster Hygiene Control Laundry Wash also should be of particular interest to specialists in the rental, laundering, maintenance and delivery of workwear for product protection for catering garments and uniforms. It can be added to the final rinse with optimal efficacy without affecting the characteristics of the material to reduce the microbial load, both bacterial and viral.

Biomaster in paper and board

Paper is inherently difficult to clean, which makes it a perfect breeding ground for pathogens and a potential source of cross-contamination. Anything from patient files and folders to food

packaging and wallcoverings are possible transmission points for harmful microbes.

Biomaster paper grade additive can be applied either during manufacture or in post treatment to provide effective, lasting antimicrobial protection, reducing the build-up of microbes on the surface during storage.

The virucidal efficacy of Biomaster technology was independently tested on samples of treated wallpaper and proved a significant reduction in the viral load.*



Test agent	Contact time	Log10 reduction	% reduction
Treated wallcovering	1 hour	3.27	99.9
	6 hours	≥4.13	99.99
	24 hours	≥3.75	99.98

*Full test results available on request.

For more information about Biomaster antimicrobial technology in textiles or paper visit our website. For more information about Biomaster Hygiene Control products visit TheHygieneDoctor.co.uk.