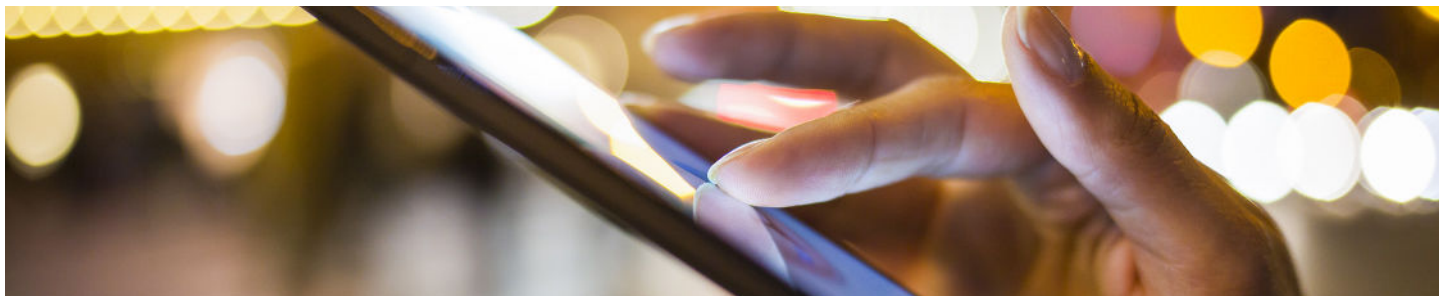


# MICRO-ORGANISMS ON MOBILE PHONES: THE POLYGIENE BIOMASTER SOLUTION

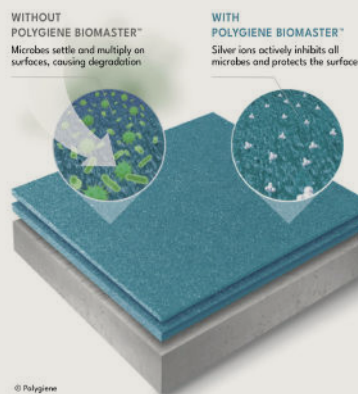


## How clean is your mobile device?

1. The typical mobile phone carries over 25,000 bacteria per square inch. This is dirtier than a kitchen counter (1,736 bacteria per square inch), your dog's food bowl (2,110 bacteria per square inch), and the typical doorknob (8,643 bacteria per square inch).
2. One of the reasons our phones are so dirty is the heat they produce. Warm environments are where bacteria thrive. Your phone has its own heat producing mechanisms, and you are adding to its hospitable environment by holding the device in your hands or storing it in your pocket.
3. Fecal matter can be found on one of every six smartphones, according to a 2011 study by researchers at the London School of Hygiene & Tropical Medicine. Fecal bacteria can survive on hands and surfaces for several hours.
4. The same study found that 16% of phones sampled were found to have E. coli present. These bacteria can live in the intestines and be transferred via fecal matter. They cause food poisoning, diarrhea, or occasionally more severe illness.
5. Staphylococcus, a bacterium often found on mobile devices, is the source of strep throat, an illness more common in children. It can also cause scarlet fever, impetigo, toxic shock syndrome, or necrotizing fasciitis - a flesh-eating disease.
6. Another common strain found on mobile phones is Staphylococcus aureus.

7. The bacterial strain Corynebacterium found on phones is responsible mainly for Diphtheria and can also cause skin infections, pneumonia, and endocarditis (inflammation of the heart).
8. Mobile phones carry a greater risk in particularly germ-heavy environments. Healthcare workers can easily pick up disease-producing microbes - including methicillin-resistant Staphylococcus aureus (MRSA) - on their gloved or ungloved hands and then transfer it onto their mobile phones.
9. The point of mobile technology is that you can take it everywhere, including some less-than sanitary environments - the bathroom, for example. When toilets flush, they spread germs. In the bathroom, there will also be other people's germs on the seat, flush handle or button and toilet roll holder, and cubicle door.

## How does Polygiene BioMaster work?



**POLYGIENE**  
PRODUCT PROTECTION



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## Micro-organisms on mobile phones: The solution

Polygiene BioMaster™ offers 24/7 antimicrobial surface protection to mobile phones, inhibiting the growth of harmful bacteria for the lifetime of the product to which it is added.

Exposure to some types of bacteria can help boost an immune system, but many of the germs you are likely to encounter on the surface of your mobile phone can make you ill.

1. Most people don't think twice about using their mobile phones everywhere, from their morning commute to the dinner table to the doctor's office. Your own hand is the biggest culprit when putting filth on your phone. People check their phones about 47 times per day, affording plenty of opportunities for micro-organisms to move from your fingers to your phone.
2. Research shows that 95% of us don't wash our hands properly. If you're shaking hands with someone or touching something that anyone else has ever touched, there's serious germ potential.
3. Because mobiles are electronic, people are reticent about cleaning them for fear they will damage them. Moreover, although sanitizers and wipes are good at removing bacteria, they are only effective for a short time. Any bacteria landing on the surface after the sanitizer ceases to become effective can double every 20 minutes.

Polygiene BioMaster can be easily introduced into almost any mobile device, offering effective, durable product protection against harmful bacteria.

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.

Polygiene BioMaster only imparts antimicrobial properties and does not affect the basic color or surface finish of any product in which it is used.

Independently tested in thousands of applications, Polygiene BioMaster is proven to inhibit the growth of most types of harmful bacteria.

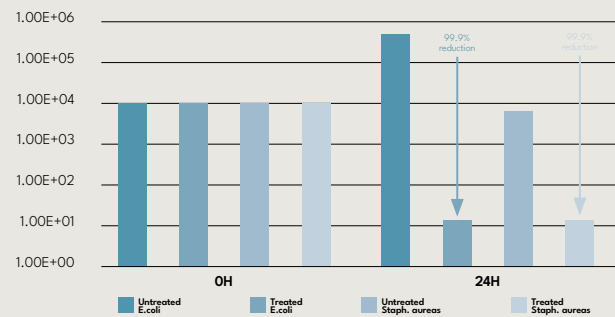
## How is Polygiene BioMaster added to my product?

Polygiene BioMaster is added to the product during the manufacturing process. Easily incorporated into any plastic or coating, it becomes an integral part of the item.

The active ingredient is inorganic and non-leaching, so it stays within the item and doesn't leach out. We can develop an antimicrobial solution for your product, including testing, in as little as four weeks.

## How effective is it?

In typical tests, after 24 hours, surfaces treated with Polygiene 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 Polygiene BioMaster protected surface.

## Learn More



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