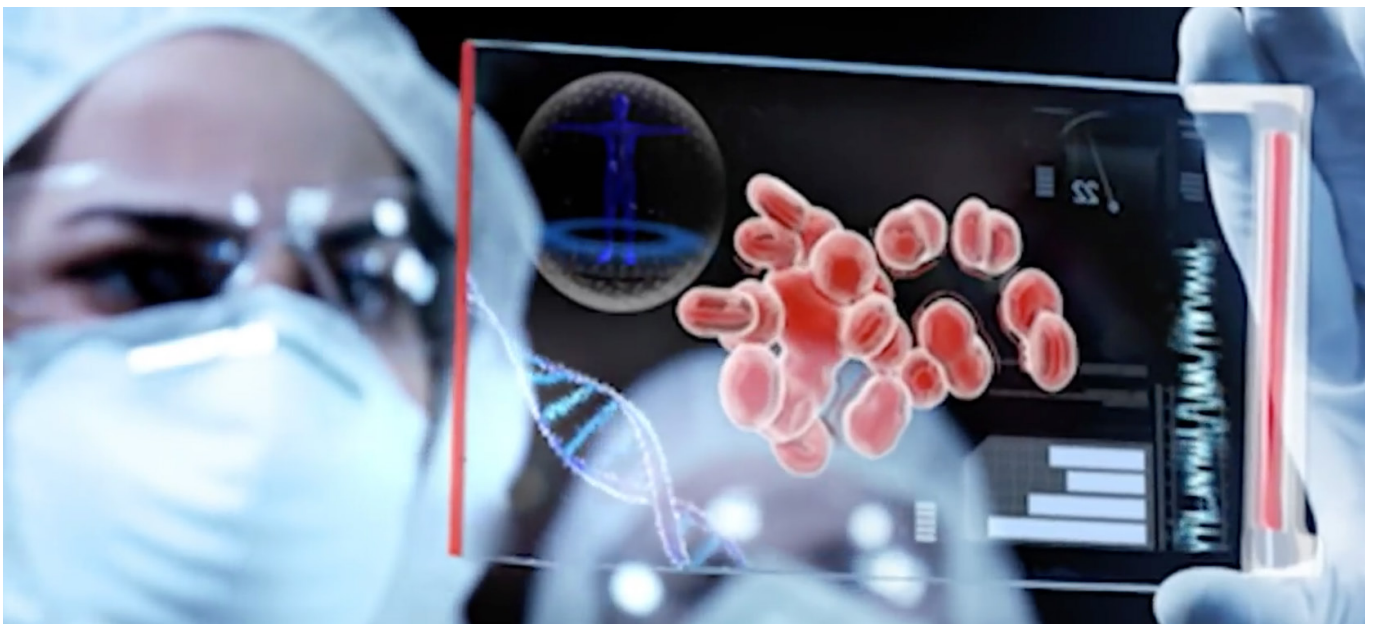




PROBIO

THE SCIENCE BEHIND PROBIOTIC CLEANING



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THE SCIENCE BEHIND PROBIOTIC CLEANING



What is probiotic cleaning?

Probiotics are useful bacteria for humans and animals that, because of an incredible technical development, are now usable for safe cleaning products. Just like most current cleaning products they remove visible filth in an effective way. But it doesn't stop there. After removing the filth the good bacteria keep on working and significantly reduce the activity of harmful bacteria. So besides the fact that these good bacteria are harmless to the environment, our probiotic cleaning products clean much more thoroughly than other cleaning products.

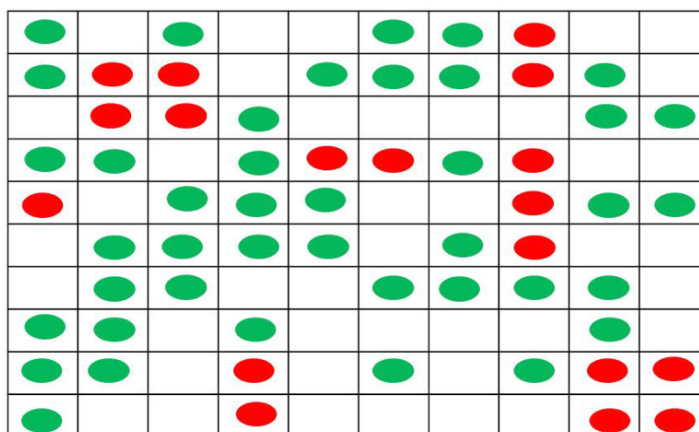
How does probiotic cleaning work?

To understand probiotic cleaning you must first understand how microorganisms work.

All around us there are microorganisms present in the form of viruses, bacteria and fungus. Although there are some that are harmful, the majority are benign, beneficial and even necessary for humans, animals and the environment.

Microorganisms live in what is called a microflora. This is a community in which they communicate with each other and organise themselves in order to survive as long as possible. To protect itself, microorganisms build a biofilm: a shield that protects them from outside influences. Unfortunately this biofilm often have an adverse effect on humans. It creates visible filth, carries smells and is a hideout for germs and harmful bacteria.

Every environment has its own microflora which continuously adapts to new circumstances.



Scheme 1: Total: 100: 42 good, 18 bad, 40 empty

For example, suppose a floor or wall provides enough nutrition, moisture and place for a microflora to keep 100 microorganisms alive.

Then the present microorganisms make sure that this maximum doesn't get exceeded. In fact, they create space in order not to get into trouble. The floor or wall is occupied by both harmful and harmless residents, while some places stay unoccupied. Since microorganisms have an average life span of a couple of days there will be a continuous grow and death cycle wherein the total community will approximately stay constant.

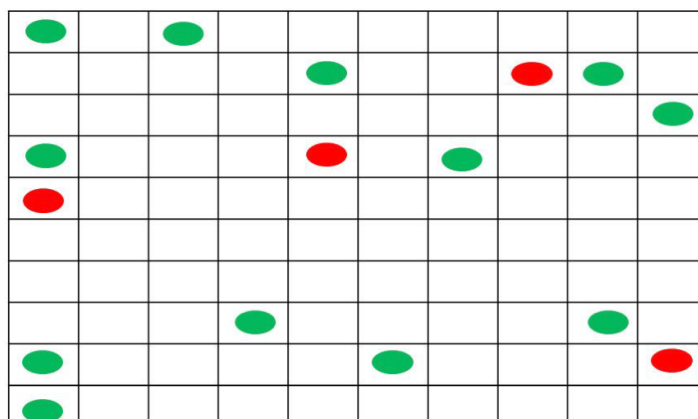


Decontamination paradox: More and more bad bacteria because of the current disinfectants.

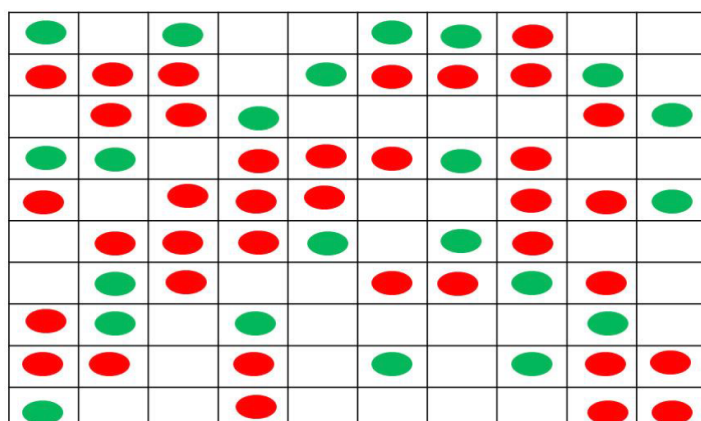
Because bacteria have long been linked to diseases, the current generation of cleaning products is especially designed to clean and disinfect. When cleaning filth (food for organisms) is removed and with disinfecting all microorganisms are being killed.

But the problem is that microorganisms are a star in survival and they adapt at an amazing rate to changing circumstances. The result, they are becoming more and more resistant for disinfectants and the biofilm becomes more persistent making traditional cleaning products less efficient in cleaning filth from surfaces.

However, the greatest danger of chemical cleaning and disinfection is that the originally innocent microflora is increasingly transforming into a more harmful society.



Scheme 2: Total 100: 12 good, 4 bad, 84 empty

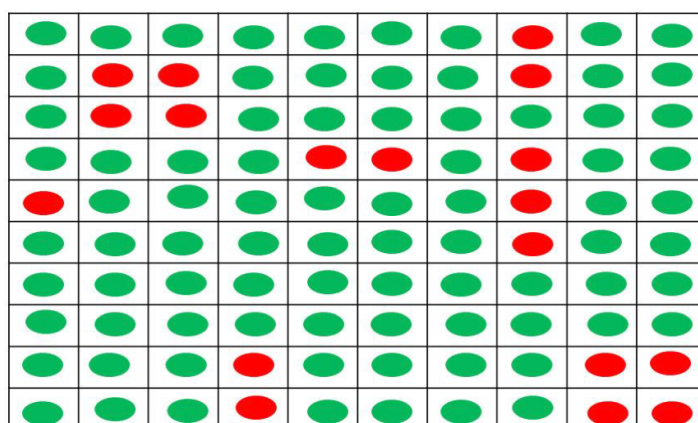


Scheme 3: Total 100: 22 good, 38 bad, 40 empty

You can see that immediately after disinfecting the number of microorganisms drops significantly. But because of the resistance the few survivors that remain will soon multiply until the required number 100 is reached once again. Since particularly harmful bacteria survive disinfecting will result in a less healthy microflora. So the more disinfectants are being used by humans, the more harmful bacteria will emerge. We call this the disinfection paradox, as it is shown in scheme 3.

Probiotic cleaning: The solution!

When cleaning with probiotics there are some very experienced forces deployed: the good bacteria. These good bacteria have been working effectively long before there were humans. Because they themselves are microorganisms, they know exactly how these function and how resistance, the disinfection paradox and stubborn biofilms can be prevented. By not destroying the (harmful) community, but by only occupying the empty spaces, bad bacteria will be prevented to get the upper hand and cause damage to humans, animals and nature.



Scheme 4: Total 100: 82 good, 18 bad, 0 empty



Revolutionary consequences



Scheme 5: Total 100: 96 good, 4 bad, 0 empty

What happens next is revolutionary. Because the community reached the maximum occupation of 100, the microorganisms give out the signal to stop expanding. When you continue to clean with probiotics the original occupation will continuously be forced to a lower activity. Eventually the original inhabitants will die of old age and their space will be occupied with the good probiotic newcomers. Because of the self-regulating effect of nature you can achieve, and sustain, a healthy microflora by using probiotics. Hence we can state that cleaning with the help of probiotics works environmentally enhancing and is safe for humans, animals and nature.

The benefits of cleaning with probiotics



GOOD FOR HUMANS, ANIMALS AND NATURE

No longer dangerous irritating substances for you, your children or for your co-workers. Probiotics are even environmentally beneficial. Not only are probiotics 100% natural, but they even contribute to treatment of wastewater. That is what we call environmentally beneficial!



LONG-LASTING DEEP CLEANING

Probiotics remove filth and biofilms deep into a surface. This isn't possible with the current generation of "traditional" cleaning products. After a cleanup the good bacteria will stay active for another 3 days. Thanks to the Triple Microscopic Cleaning Technology our products will clean on three levels.



EFFECTIVE ODOR CONTROL

Thanks to the action of probiotics bad smells are being prevented like in toilets or other moist spaces.



HARMFUL BACTERIA WON'T BECOME RESISTANT TO PROBIOTICS

Since no microorganism are being killed when cleaning with probiotics there will be no immune response



PROBIOTIC CLEANING PRODUCTS PROVED SUCCESSFUL

Various scientific studies and users such as more than 50 hospitals in Italy, North-America, and Belgium prove the success of probiotic cleaning products with amazing results. And best of all, it is as easy to use as conventional cleaning products.