A Cleaner Surface

A hands-on approach to antimicrobial protection

elektron technology plc

Arcolectric & BioCote

antimicrobial products

Elektron Technology is proud to partner with BioCote Ltd, to offer a range of antimicrobial products; BioCote® inhibits the growth of microbes on the surfaces of the following Arcolectric products:

- Push Button Switches
- Rocker Switches
- Switch Covers

Why do we need antimicrobial protection?

Microbes and can be found in any environment, as a natural part of everyday life. Even in the cleanest of surroundings, microbes begin to multiply on surfaces, sometimes to harmful levels, with one microbe having the ability to multiply to more than four million microbes within only eight hours.

BioCote technology gives the product constant, built in antimicrobial protection providing a finish that helps prevent microbes growing on the surface. BioCote protected of potentially harmful bacteria, making the need for hygiene vital, to help prevent cross- contamination.

BioCote technology

BioCote Ltd is the market leader in providing built-in antimicrobial surface protection. Utilising the power of silver, a natural antimicrobial, BioCote technology is incorporated into products at the time of manufacture. The silver technology then gives the surface of the product constant, built-in antimicrobial protection, providing a finish that helps prevent microbes growing on the surface. With BioCote protection, the Arcolectric range of products surfaces provides protection 24 hours a day.

A complement to cleaning

BioCote complements hygiene practices, working in-between cleaning, 24 hours a day to reduce levels of microbes on surfaces. BioCote antimicrobial technology has a variety of beneficial properties, making it an ideal alternative to synthetic, organic chemicals:

- Non-toxic
- Naturally occurring, environmentally-friendly and sustainable
- Will not break down, wear off, wash off or leach out of products over time
- BioCote retains its antimicrobial efficacy for the expected lifetime of the product
- Does not function in the same way as antibiotics, therefore, there is no known evidence to suggest that bacteria are resistant to it

Natural & Safe

BioCote utilizes silver ion technology. Silver is a natural antimicrobial, with a high efficacy against microbes, mould and fungi. Silver has been used for centuries for its abilities to aid preservation and help prevent infection. Silver is non-toxic, naturally occurring and environmentally-friendly.

How BioCote works

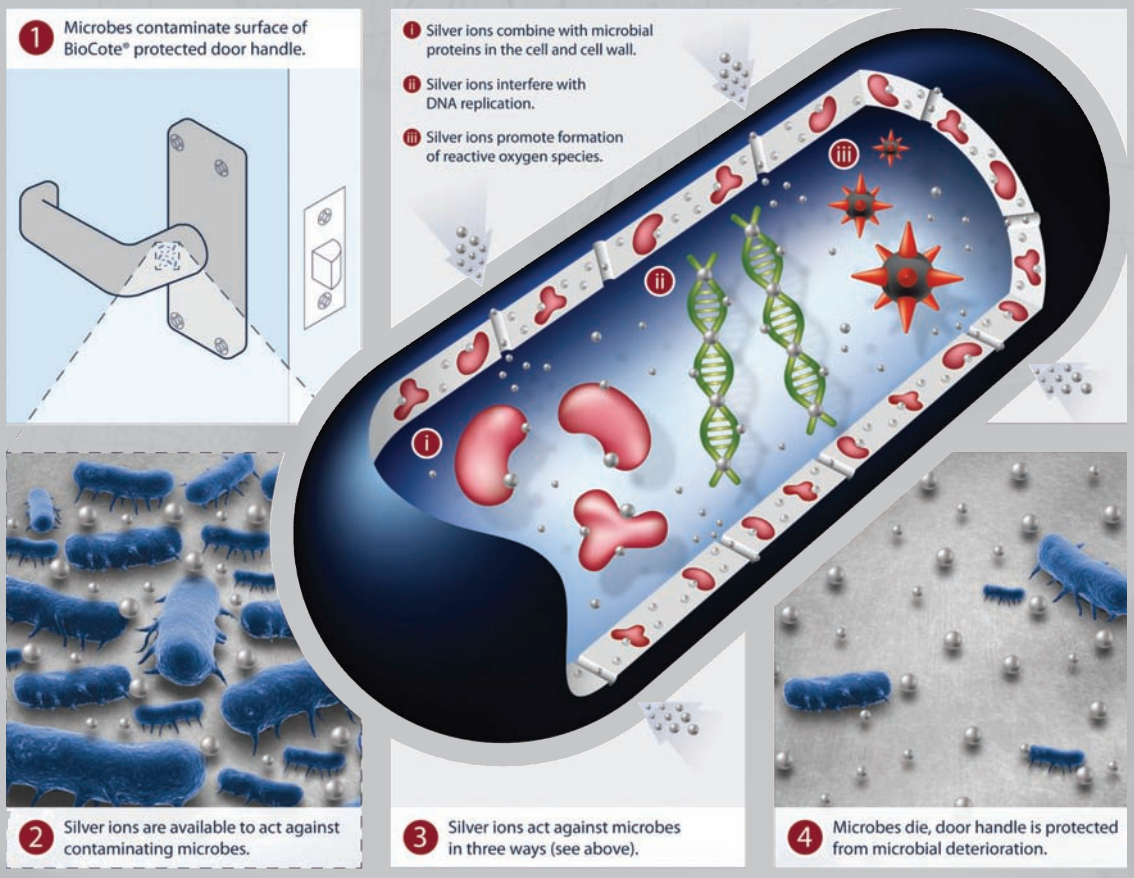
BioCote technology, in the form of silver ions, is manufactured into a product

Silver ions concentrate on the surface of the product and a low concentration are slowly released, giving it antimicrobial protection

Silver ions bind with any microbes that come into contact with the surface

The enzymes cannot produce energy, so the microbes are unable to re-produce

Silver – its remarkable properties



Simple

Silver can be economically engineered into products without large increases in production costs. Silver will not change the aesthetics of products, so they will still look and feel the same.

Long lasting

Once silver is incorporated into a product, it retains its antimicrobial efficacy for the lifetime of that product and will, therefore, not wear off, wash off or leach out.

Silver, therefore, gives products continuous antimicrobial protection throughout a product's useful life span.

Silver and other antimicrobials

There are two main types of antimicrobials: organic, based on chemicals and inorganic, such as silver.

Whilst organic antimicrobials are cost-effective, they have been linked to illnesses, such as cancer. Unlike silver technology, organic antimicrobials also decompose and leach from products and are therefore unable to provide long lasting antimicrobial efficacy. Research has also linked organic additives with bacterial resistance, due to their biological structure.

Inorganic antimicrobials, including silver, do not exhibit the toxicity of organic materials, making them safer to use.

Is bacterial resistance a problem?

To date, there is no evidence demonstrating widespread resistance of bacteria to silver. In addition, silver's multi-modal antimicrobial activity reduces the opportunity for resistance to emerge.

Intrinsic resistance can be a problem for organic antimicrobials, due to "holes" in their spectrum of activity

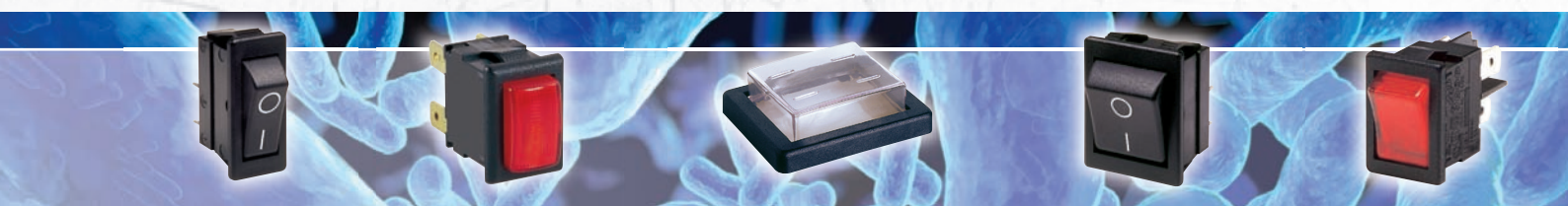
Sources:

1: www.healthcarecommission.org.uk/newsandevents/newsstories.cfm

2: European Public Health Agency 2007

3: Food Standards Agency

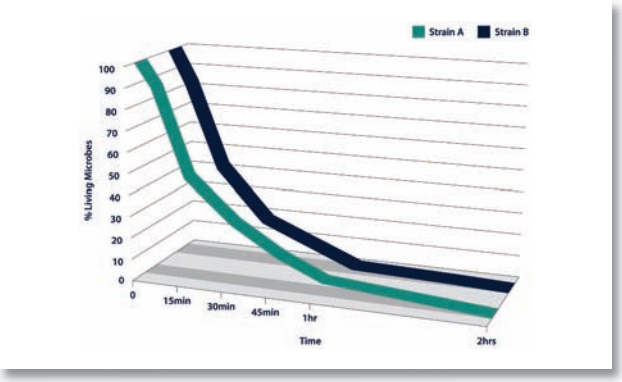
BioCote®



Continuous protection & effectiveness

The BioCote brand is your guarantee of antimicrobial efficacy. All BioCote protected products are tested by an independent laboratory using the ISO22196:2007 test method. Laboratory tests show that on a BioCote protected surface, the levels of microbes are reduced by up to 99.9% over a 24-hour period.

BioCote protection will not break down, wear off or leach from the surface of a product. BioCote retains its antimicrobial efficacy for the lifetime of the range of products from Arcolectric.



An illustration showing the % reduction of Strain A and Strain B on a BioCote protected surface, using the ISO22196:2007 test method

Independent validation & quality control

CERTIFICATE OF EFFICACY

BioCote

Certificate No. 1017261.216/5966
Customer Ref. 50/563

SAMPLE DETAILS DATE RECEIVED 13/09/2011

ELEKTRON

METHOD: Determination of Antibacterial Activity using Test Based on ISO 22196

DATE ANALYSED 21/09/11 DATE REPORTED 23/09/11

RESULTS (as cfu cm²)

SAMPLE	SPECIES	REDUCTION (%)
RE07 B040CL01	STRAIN A STRAIN A	>99.89% >99.89%
RE07 B040CL01	STRAIN B STRAIN B	>99.90% >99.90%

The above data shows the difference in the population following contact with the surface of the samples listed for 24 hours at 35°C under RH of 95% relative to initial population

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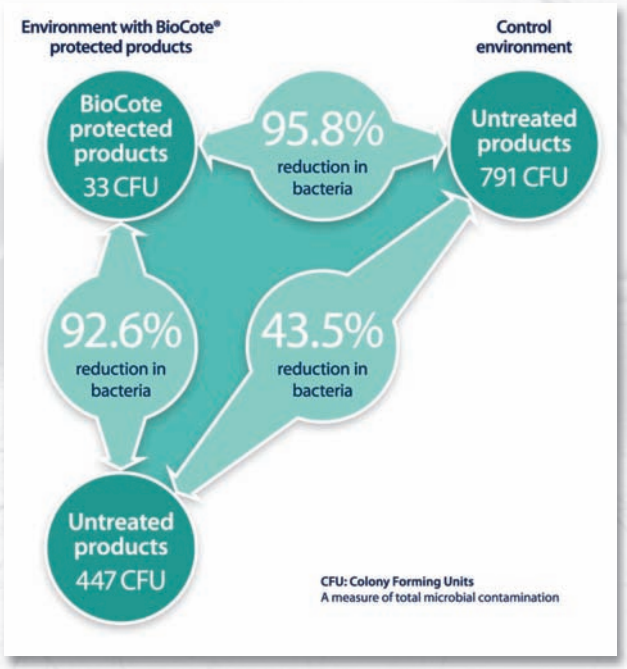
The information shown above is for marketing purposes only, based on results obtained from an independent laboratory

BioCote provide continuous quality control testing, with testing at independent laboratories. Partners are provided with full certification.

Proven real-life reductions

BioCote Ltd is the first company to demonstrate how using silver treated products in a hospital environment results in a reduction in microbial contamination. The study was carried out in association with the Heart of England NHS Foundation Trust. It shows that BioCote protected products harboured 95.8% fewer microbes on their surface than untreated products. Similar studies have also been carried out in a cooked meat processing unit and care home facility. This growing evidence base demonstrates how using BioCote protected products can inhibit the growth of a broad spectrum of microbes contamination, resulting in cleaner and more hygienic products.



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