



HILLCROSS
Hygiene.

Hillcross Organics

EFFICACY STATEMENT

The world's first organic, environmentally friendly 3D microbiota surface barrier.
Powered by Citrox

BACKGROUND

A British team of scientists had been working since the late 1990s to achieve a biotechnological breakthrough in pathogen control. Their hypothesis at that time was that if they could build on research initiated in the 1930s by Hungarian Nobel Prize winner Szent-Gyorgi on Natural Bioflavonoids. The objective was to use Nature's own 'weapons' to fight disease in plants, animals and humans. Citrox Biosciences was one of the companies born from this research.



Hillcross Organics BCL in direct comparisons to chemical sanitisers such as chlorine, peroxide, iodine and QAC perform exceptionally well, **in most cases they outperform the alternatives.**

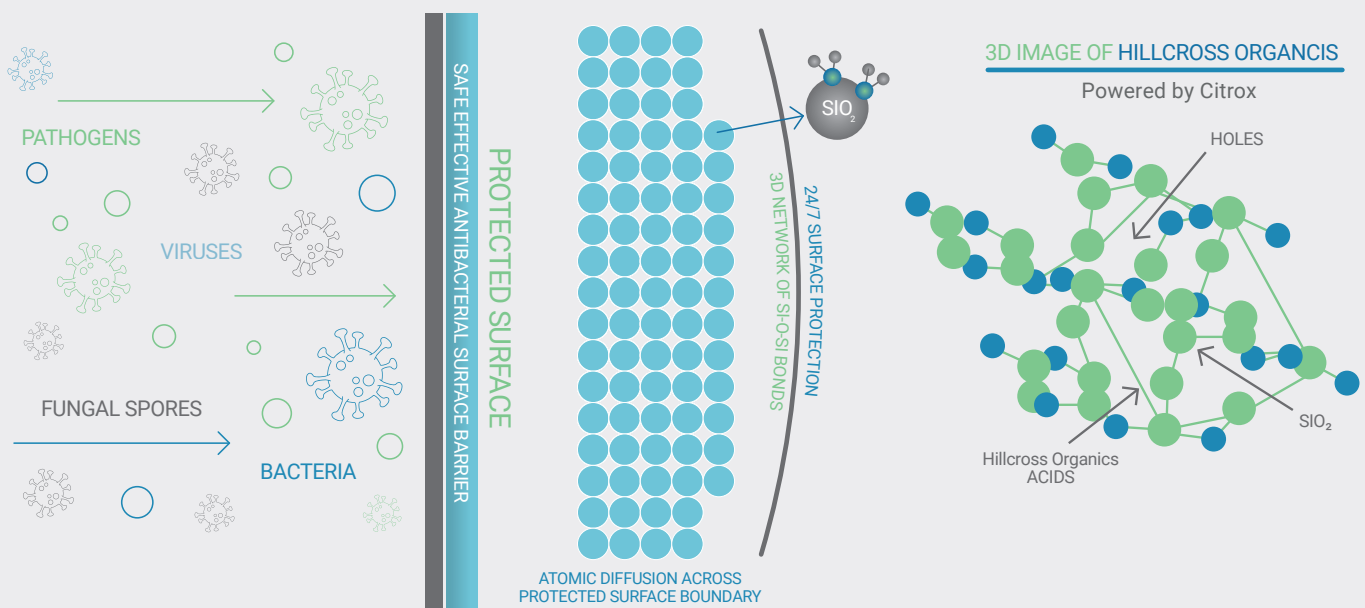
Our product BCL (Bioflavonoid Complex), is a complex bioflavonoid compound created by a former ICI chemist in the UK, Ian Ripley, one of the founders of Citrox Biosciences Ltd.

Bioflavonoids are naturally present in plants, fruit and vegetables, there are over 3,600 identified having a wide range of uses including anti-oxidants & food ingredients. The key ingredients are extracted from immature bitter oranges through a specialised extraction & filtration process. The extracted Bioflavonoids are then combined with a number of fruit acids to produce the core bioflavonoid complex (BC). The BCL has broad spectrum anti-microbial, anti-viral, mould and fungus destroying properties. Hillcross Organics BCL in direct comparisons to chemical sanitisers such as chlorine, peroxide, iodine and QAC perform exceptionally well, in most cases they outperform the alternatives.

SiO₂ International have over 25 years of surface coating experience and knowledge. Their scientific expertise comes from extensive education and years of experience developing the coatings across Manufacturing, Maintenance, Architectural Glass, Textile, Transportation, Commercial Equipment, Automotive, Agriculture, Healthcare, Historic Preservation.

Their technical team includes Nano-technicians certified by the German Government who have a deep understanding of application fundamentals, surface analysis and the German industry offering similar products.

Recently (2019) their Nano-technicians successfully combined Citrox and SiO₂ at a sub-atomic level to create Hillcross Organics. This brings the viricidal active ingredients of Citrox into a resilient and semi-permanent surface coating.





To whom it may concern

July 2020

COVID-19 Information

COVID-19 belongs to a family of viruses, named Coronaviridae.

Dear Sir/Madam,

There are 4 major genera in the family of Coronaviruses: Alpha-, Beta-, Delta- and Gamma Coronavirus. All of them are very closely related and are large enveloped viruses containing single stranded positive sense RNA.

Viral Envelopes are the structures that cover virus core. Viral envelopes are comprised of lipids and originate from the infected host cells. Due to their cell origin, compositions and structures of envelope lipids are highly conserved and not strain specific. The formulations effective against one strain of enveloped virus representing the virus family is extremely likely to be effective against the whole family of viruses. That is why regulatory agencies such as the US EPA and Health Canada created a list of surrogate viruses that possess equivalent susceptibility and belong to the same virus family as the viruses desired for a disinfectant or antiseptic efficacy claim.

The difference in strains of Coronaviruses is their pathogenicity, some of the Coronaviruses cause mild respiratory illness, and others like SARS, MERS and COVID-19, can be lethal. SARS, MERS, and COVID-19 are Beta-Coronaviruses. Our product has been successfully tested against SARS (betacoronavirus) strain which is very similar to the current virus COVID-19.

An enveloped virus is easier to kill under normal circumstances, however our product has also been tested to be effective against the nonenveloped virus (Norovirus) which is a far more difficult virus to control and eradicate.

Yours faithfully

A handwritten signature in black ink that reads "R. Thomas".

Richard Thomas
Managing Director

WHAT IS IT?

Hillcross Organics powered by Citrox is a three-dimensional microbiota barrier coating, created by mixing two natural ingredients: SiO₂ and Hillcross Organics, both eco-friendly compounds.

Combining Citrox and silicone dioxide (SiO₂) protects surfaces from bacteria, viruses or mildew, and is infused and encapsulated for stability and slow diffusion.

By adding SiO₂ to the mixture, the product creates a barrier that prevents viruses from being absorbed and the Hillcross Organics solution kills viruses on contact, keeping surfaces protected for six months.

Hillcross Organics powered by Citrox has been extensively tested against many bacteria and viruses including the **SARS Corona Virus**.

WHAT IS IT EFFECTIVE AGAINST?

Hillcross Organics powered by Citrox has been extensively tested against many bacteria and viruses including the SARS Corona Virus.

Severe Acute Respiratory Syndrome (SARS) caused by severe acute respiratory syndrome coronavirus (SARS-CoV or SARS-CoV-1).

Details of the bacteria, viruses, fungi and Protozoa it has successfully been tested and proven effective against are listed at the back of this document.

SiO₂ has also been extensively tested confirming that it is antimicrobial, water and oil resistant, abrasion resistant (using both the Martindale and Taber test methods), scratch resistant, it protects against UV and weathering, is hard but with elastic properties, is safe for human health and the environment and is approved for use on technology by Microsoft.

BACTERIA

Campylobacter jejuni
Candida albicans
Chaetomium globosum
Dipiodianatalensis
Listeria Monocytogenes
MRSA (Clinical strain)
Mycobacterium Fortutumium (NCTC 8573)
Proteus Vulgaris
Pseudomonas Aeruginosa (ATCC 15442)
Salmonella Cholerasuis
Salmonella Typhimurium (DT004)
Escherichia coli
F. sp. tuberosa
Fusarium sambucinum
Geotrichumcandidium
Klebsiella pneumonia
Lactobacillus pentoaceticus
Legionella pneumophila (NCTC11192)
Staphylococcus Aureus (NCTC 6571)
Staphylococcus Pyogenes
Staphylococcus sp.
Streptococcus Faecalis

VIRUSES

SARS Cov 2 (Covid 19)
SARS Cov 1
H5N1 (Avian Influenza A)
Human Rhinovirus
Influenza A
Human Immunodeficiency Virus (HIV)
Urbani SARS
African swine fever
Foot & mouth disease
Gumboro virus
Herpes virus type 1
Herpes virus type 2
Herpes zoster
Hepatitis A, B & C

PROTOZOA

Histomonasmeleagradis
Giardia lamblia
Entamoeba histolytica
Blastocystis hominis

YEAST AND FUNGI

Aspergillus oizae
Aspergillus flavus
Aspergillus niger
Aspergillus terreus
Botrytis cinerea
Candida albicans
Candida glabrata
Chaetoniunglobosum
Cladosporium
GeotrichumCandidium
Collectotricum sp.
Fusarium sp.
Mucor sp.
Penicillium sp.
Penicillium Digitatum
Penicillium Funiculosum
Penicillium Italicum
Penicillium Roqueforti
Phomopsis OrtI
Pullularia pullulans
Pythium sp.
Trichophyton interdigitale
Trichophyton mentagrophytes

ACCREDITATIONS

Hillcross Organics powewred by Citrox is accredited to the latest EN standards including;

- ✓ **EN13624** Chemical disinfectants and antiseptics. Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity in the medical area.
- ✓ **EN13727** Chemical disinfectants and antiseptics. Quantitative suspension test for the evaluation of bactericidal activity in the medical area.
- ✓ **EN14476** Chemical disinfectants and antiseptics. Quantitative suspension test for the evaluation of virucidal activity in the medical area.

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