

Si Bac-Pure[®] Anti Covid Treatment



Central - Inca

Av. Lluc 72
T. 971 504 339
info@proexpci.com

Sucursal - Palma

Real Club Náutico
T. 971 710 541
M. 637 463 900

Si Bac-Pure

- Si Bac-Pure® is a sustainable functional finish with antiviral and antimicrobial properties.
- This treatment is effective for more than 100 washes in the fight against bacteria, fungus, mould and unpleasant smells. It is ideal for odor-control and for the prevention of textile contamination and degradation. Si Bac-Pure® provides long-lasting hygiene, freshness and cost-effective added-value to your textiles, fabrics, garments, fibers and nonwovens.
- The active substance used in BAC-PURE® has been approved by the US EPA, is registered in REACH, and it does not contain any of the substances on the SVHC list. It does not contain metal ions.
- Si Bac-Pure®, has been tested against several micro organisms giving excellent results in the elimination of most bacteria (gram positive and gram negative) and against fungi.

Bacteria

ASTME2149-13a - *Staphylococcus aureus* (ATCC 6538)

ISO 20743:2013 - *Staphylococcus aureus* (ATCC 6538)

ASTME2149-01 - *Staphylococcus aureus* (ATCC 6538)

ASTME2149-01 - *Klebsiella pneumoniae* (ATCC 4352)

ASTME2149-01 - *Escherichia coli* (ATCC 25922)

NP EN ISO 20645:2004 - *Staphylococcus aureus* (ATCC 6538)

Fungus

NP EN 14119:2005 - *Trichophyton mentagrophytes*

NP EN 14119:2005 - *Trichophyton rubrum* (ATCC 28188)

Coronavirus Test Evidencies



According to the European Centre for Disease Prevention and Control (ECDC <https://www.ecdc.europa.eu/en>), the active substance used in Si Bac-Pure formulations - Benzalkonium Chloride (BAC) - is known to be effective **against coronaviruses**



Studies performed at the University of Tsukuba, Japan, show that Canine **Coronavirus** (MHV and CCV) were inactivated using only 0.05% benzalkonium.

Ref: https://www.jstage.jst.go.jp/article/expanim1978/37/3/37_3_341/pdf



Test Evidencies



According to the Food and Drugs Administration (FDA) in the United States, benzalkonium chloride is designated as “GRAS” (generally regarded as safe) for topical antiseptic applications. It is effective against gram-negative and gram-positive **bacteria** associated with nosocomial infections (hospital infections) and **many virus** associated with upper respiratory infections **including human coronavirus**.

[Ref: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3145214/#bibr31-1740774511403513](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3145214/#bibr31-1740774511403513)



Health Canada has developed a list of hard-surface disinfectants that are likely to be effective and may be used **against SARS-CoV-2, the coronavirus that causes COVID-19**. For these products, evidence was submitted demonstrating that they are effective against harder-to-kill viruses or other viruses very similar to SARS-CoV-2.

[Ref:https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html#tbl1](https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html#tbl1)

Test Evidencies

OTHER VIRUSES

In 1963, a study performed in the Sterling-Winthrop Research Institute, New York, concluded that benzalkonium chloride inactivates **several other virus** such as influenza, measles, canine distemper, rabies, fowl laryngotracheitis, vaccinia, Semliki Forest, feline pneumonitis, meningo pneumonitis and herpes simplex viruses.

[Ref:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1058082/?page=1](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1058082/?page=1)

Where we can apply it

Si Bac-Pure® can be applied to any type of porous fiber, such as:

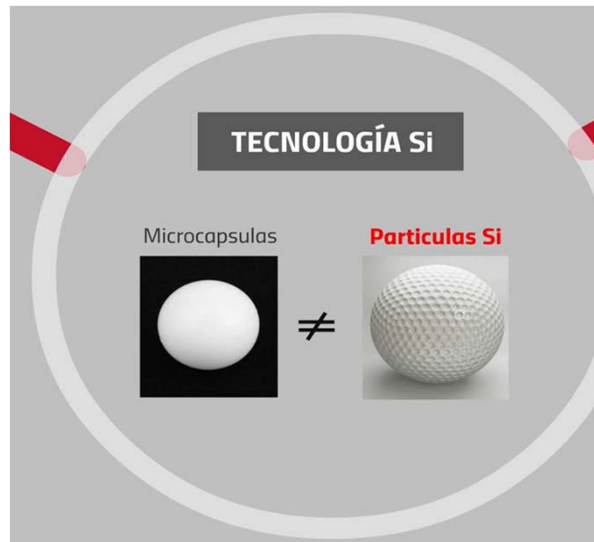
- work clothes
- curtains
- sheets
- duvets
- carpets
- wall coverings
- floors
- armchairs
- upholstered
- furniture
- etc...

How does it works

- Our Si Bac-Pure® technology consists of depositing the active substance of benzalkonium chloride on a fiber and anchoring it in any type of tissue.
- This active substance already exists in the market, in products of recognized efficiency. It has been patented by large multinationals and is totally safe since it is approved by the world health organization and by the Spanish health list.
- Its effectiveness is proven by laboratories accredited for their microbicide function, anti-bacterian, anti-mites, and mosquitos repellent.

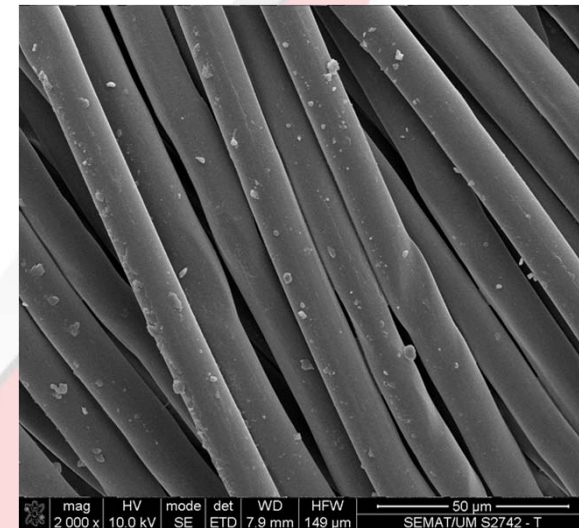
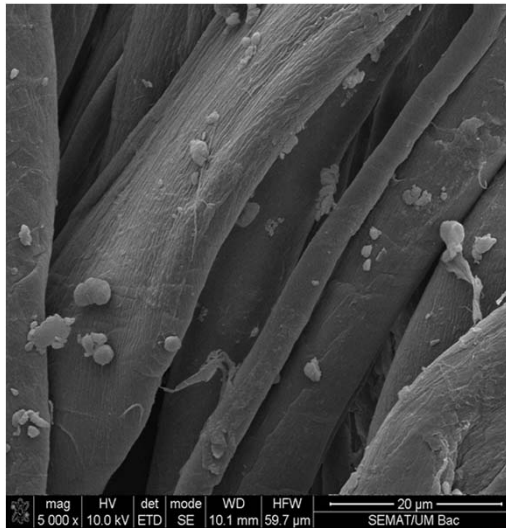
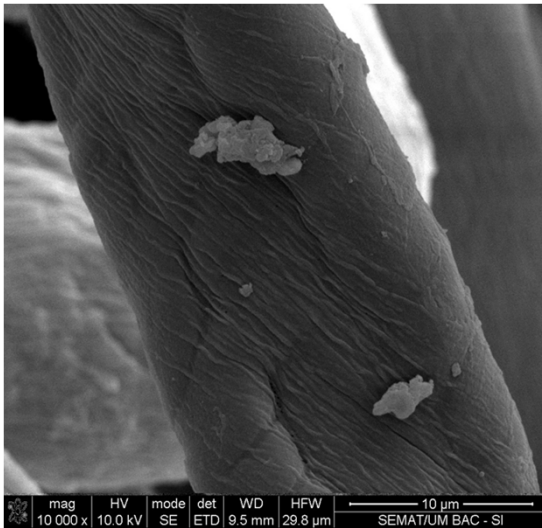
Why is it innovative?

- What is really new is how the active substance is brought and permanently attached to the textile fibers. this methodology is patented in 147 countries.
- Our patented technology does not use microcapsules. The Si technology consists of a matrix of silica (Si) particles which carry the active ingredient on their surface and fixes it on the substrate, providing durability high-performance and washing resistance. Unlike microcapsules, our innovative system is not affected by temperature, friction, UV exposure or other factors



- On the other hand, microcapsules contain chemical active substances. These substances are Released when the microcapsule Breaks down. Therefore the use of microcapsules will not allow a continuous action of the active substance, that will disappear immediately after the break down, losing its effectiveness.

MICROSCOPE VIEW OF Si PARTICLES DEPOSITED ON FIBERS



These microscopic images show the Si particles attached to a textile substrate. These particles carry benzalkonium chloride on their surface, activating the treated material with the microbicide function.

Added effects:

TEXTIL



Repel Mosquito
Technology by
Smart Inovation®



Mites
Technology by
Smart Inovation®



Bactericidal
Technology by
Smart Inovation®

ANTI MOSQUITO

- Si Bac-Pure® repels mosquitos (this is not an insecticide). it ensures that these insect, that are disease transmitters are kept away from the treated textiles
- Prevents:
 - Malaria
 - Dengue
 - Yellow fever
 - Chicungunia fever
 - Others...
- Totally safe for human use, this product is registered by the World Health Organization
- Efficiency
 - 91% after 50 washes
 - 84% after 80 washes
 - 75% after 100 washes

These tests have been carry out by:



ANTI MITES

- Si Bac-Pure® repels mites (this is not an insecticide). it ensures that these insect, that are disease transmitters are kept away from the treated textiles
- Prevents respiratory allergies:
 - Allergic rhinitis
 - Asthma
 - Conjunctivitis
 - Atopic dermatitis
 - Others...
- According to OMS, 30% of the European population suffer from some kind of allergy.
- Totally safe for human use, this product is registered by the World Health Organization
- Efficiency
 - For *Dermatophogoides Pteromyssimus* 92% after 100 washes
 - For *Dermatophogoides Farinae* 86% after 100 washes
 - Please note that 95% of all allergies are due to these two mites

These tests have been carry out by:



ANTI BACTERIA

- Si Bac-Pure[®], gives excellent results in the elimination of most bacteria (gram positive and gram negative)
- Prevents nosocomial diseases (also known as hospital infections) and other related ones
- According to the OMS, Europe counts more than 37.000 dead and more than 4,1 Million infected by nosocomial diseases
- Totally safe for human use, this product is registered by the World Health Organization
- 99% Efficiency

Tests have been performed by:



Particulate application

- The applying methodology of the particles is carried out following the usual cleaning processes.
- By fouling or bath with the products (particles and smart fix) prepared in the mill and subsequently dried in copper or dryer.
- Spraying in situ performing a subsequent drying with temperature.

Central - Inca

Av. Lluc 72

T. 971 504 339

info@proexpci.com

Sucursal - Palma

Real Club Náutico

T. 971 710 541

M. 637 463 900