

Where there's a will there's a way

Nanotechnology ExBiofunctional Developmentic Wear



OUR MISSION

- Design and produce solutions based on nanotechnology that minimize and/or solve people's needs, contributing to a healthier society;

- Identify and develop innovative solutions with high added value to be included in a wide range of applications;

- Challenge the established rules and paradigms, bringing gains in competitiveness and new markets of business.







SUCCESS GADGET



Success Gadget technology was initially developed by a research group from University of Minho. Lately, the technology was optimized and patented, being known as Sil2U[®].





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Success Gadget produces, develops and sells Sil2U[®] functionalized particles, revolutionising the paradigms of insect repellents and antimicrobials.



SIL2U® TECHNOLOGY

Sil2U[®] grants properties to several materials, through the use of **particles**, which work as a **carrier for the active agents**, attaching them to the substrates.





SIL2U[®] ANTIMICROBIAL





there's a way





SIL2U[®] ANTIMICROBIAL

Surfaces disinfection

Care Us – long lasting multi surface disinfectant, is formulated to extend and enhance the antiseptic action. By the use of unique Sil2U[®] technology, active ingredients are stabilized in the formulation to remain active for extended period.



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Halo assay, quality control





Test performed at Biological Engineering Department of Minho University

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ISO 20743, quantification results after 7 days of application over porous surfaces

Klebsiella pneumoniae



Application time

ISO 20743 was used.

No bacterial growth is observed, even after 7 days after application on porous surfaces.



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ISO 20743, quantification results after 7 days of application over porous surfaces

Escherichia coli



Application time

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AATCC 30, Antifungal Activity, Assessment on Textile Materials: Mildew and Rot Resistance of Textile Materials



Candida albicans

AATCC 30 was used.

No *Candida albicans* growth is observed, even after 7 days after application on porous textile surfaces.



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ISO 22196, quantification results after 7 days of application over metallic non porous surfaces

Staphylococcus aureus





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ISO 22196, quantification results after 7 days of application over metallic non porous surfaces





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AATCC 30, Antifungal Activity, Assessment on Textile Materials: Mildew and Rot Resistance of Textile Materials



Candida albicans

AATCC 30 was used.

No *Candida albicans* growth is observed, even after 7 days after application on metallic non porous surfaces.



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ISO 18593:2018, Assay over surfaces

Antimicrobial activity



Surfaces under test	Results (CFU*/100 cm²)	
Control (not treated surface)	7,3 E1	
Interior of bag pack	< 5,0 E0	
Exterior of bag pack	< 5,0 E0	
Table surface	< 5,0 E0	
Keyboard	< 5,0 E0	
Door handle	< 5,0 E0	

* CFU: colony forming units

Anti-bacterial ISO 18593:2018 (point 9, 10) - Microbiology of the food chain -Horizontal methods for surface sampling and ISO 4833-1:2013 -Microbiology of the food chain -Horizontal method for the enumeration of microorganisms - Part 1: Colony count at 30 °C by the pour plate technique assay were made.

24 h after the application of *Care Us – long lasting multi surface disinfectant* over several surfaces, **under normal day usage of the surfaces**, the results demonstrate no bacterial growth.



Where there's a will there's a way Test performed in an independent laboratory, Portugal



ISO 18593:2018, Assay over surfaces



Test performed at AmicoLab, Suiss

72 h after the application of Care Us – long lasting multi surface disinfectant over surfaces, the results demonstrate no bacterial growth.

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ISO 18593:2018, Assay over shelf surfaces







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ISO 14476:2013 – Chemical disinfectants and antiseptics

Virucidal activity evaluation

EN 14476:2013+A2:2019 - Chemical disinfectants and antiseptics -Quantitative suspension test for the evaluation of virucidal activity in the medical area - Test method and requirements (Phase 2/Step 1)



Care us formulation was tested for contact during 5 minuts, with **viral reduction more than 99,99 %**.



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Virucidal activity evaluation

ISO 18184:2019 . Textiles – Determination of antiviral activity of textiles products



SARS-CoV-2 and other coronaviruses

Care us formulation was directly sprayed on textile surfaces,

with excellent anti-virus effect after 1 hour of contact.



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Virucidal activity evaluation

ISO 18184:2019 . Textiles – Determination of antiviral activity of textiles products



reference virus for SARS-CoV-2 and other coronaviruses

Care us formulation was directly sprayed on textile surfaces, and tested **24 hours after application**, with **excellent antivirus effect after 1 hour of contact**.



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Virucidal activity evaluation

ISO 18184:2019 . Textiles – Determination of antiviral activity of textiles products



SARS-CoV-2 and other coronaviruses

Care us formulation was directly sprayed on textile surfaces, and tested **48 hours after application**, with **good anti-virus effect after 1 hour of contact**.



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EN 13704: 2018, Chemical disinfectants -Quantitative suspension test for the evaluation of sporicidal activity of chemical disinfectants (...)



Care us formulation was tested for contact against *Bacillus subtilis*, showing **sporicidal activity (more than 99,99 %).**



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Virucidal activity evaluation

ISO 18184:2019 . Textiles – Determination of antiviral activity of textiles products

Product	Contact time	Antiviral efficacy value, Mv	Standard Effect	
5 ply Airdry Biorism Earloop Mask - Black XL	60 min	2.89	Good Effect	
Modified vaccinia virus Ankara (MVA)				
reference virus for				
SARS-CoV-2 and other coronaviruses				

Care us formulation was directly sprayed on textile surfaces, and tested **24 hours after application**, with **good anti-virus effect after 1 hour of contact**.



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Summary



Virucidal activity evaluation

ISO 18184:2019 . Textiles – Determination of antiviral activity of textiles products





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