ECOLAR

- Start a Fresh Chapter of Healthy Life !

益曜科技

- 開啟健康生活新篇章！

ECOLAR 益曜科技

Ecolar Technology Limited

益曜科技有限公司

About US

PolyVenture
from PolyU Entrepreneurship Programme

POWERED BY PolyU Tech

ECOLAR:

A high-tech enterprise in Hong Kong, jointly incubated by the Hong Kong Polytechnic University and the Hong Kong Science and Technology Park

Hong Kong Polytechnic University and the Hong Kong Science and Technology Park

Protecting environment and human health

Credibility, continuous innovation, win-win cooperation

The company's core R&D team and service platform:

- Smart Wearable System Research Institute (The Hong Kong Polytechnic University, Hong Kong)
- School of Fashion and Textiles (The Hong Kong Polytechnic University, Hong Kong)
- The Hong Kong Polytechnic University-Jinjiang Technology Innovation Institute (Fujian of China)
- Yinhu Innovation and Entrepreneurship Research Institute, Zhejiang University of Technology, China

Background and History

- With the global concern about the serious environmental pollution caused by traditional plastics and other difficult to degrade in the natural environment, as well as the increasing problem of microplastic pollution, the development of biodegradable plastics and fiber products has become particularly important. The spread of superbugs and coronavirus has also led to an increasing number of infections and threatened people's health.

- The company created the "BLESSTAR®" and "EVER ECOLAR®" series of eco-friendly biodegradable antibacterial and antiviral products. Main products and services: highly-effective antibacterial and antiviral finishing agent, disinfectant, chips, textile antibacterial finishing and related technical services. Widely used in medical supplies, textile and apparel, home textiles, maternal and childcare, female products, personal protection and other fields.

2014

Discovery of antimicrobial properties of PHA fiber

Product: PHA filament yarn, knitwear

Innovation and Technology Fund ITP/050/13TP

2016

Processing of PHA fiber and low-temperature dyeing and finishing process

Product: PHA knitted fabric

Innovation and Technology Fund ITP/039/16TP

2018

PHA antimicrobial mechanism

Product: Antibacterial finishing agent - 1st generation

The Hong Kong Polytechnic University PolyU 8-847A

2019

PHA antimicrobial coating

Products: disposable masks, bedding (prevention of cross-infection in hospital wards)

Innovation and Technology Fund SST/040/20GP

2022

PHA family –2nd generation

Products:

- Antibacterial finishing agent - 2nd generation
- Antimicrobial coating
- Personal protective equipment (masks)
- Hygiene products (diapers, tissues)
- Home textile products (mattresses, socks)

2023

PHA family – 3rd generation

Products:

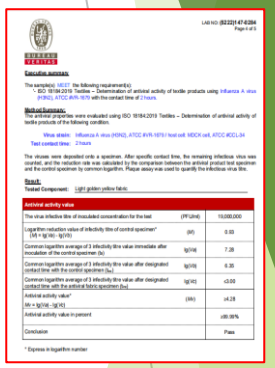
- Antibacterial finishing agent - 3rd generation
- Antimicrobial coating
- Antimicrobial plastics
- Furniture: sofa
- Daily necessities: laundry detergent, dry towels, wet wipes, etc

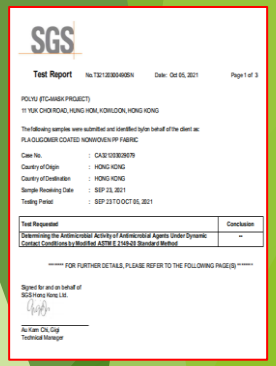
BLESSTAR Antimicrobial Spray:

BLESSTAR ® EVER ECOLAR®

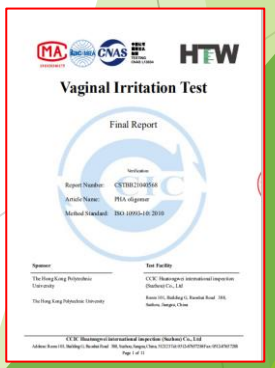
Antibacterial Performance (20 mg/mL) (ASTM E2315-16 + ASTM E2783-22)				
Concentration	S. Aureus (1min)	K. Pneumoniae (1min)	C. Albicans (1min)	Methicillin-resistant S. Aureus (1min)
20 mg/mL	> 99.99%	> 99.99%	> 99.99%	> 99.99%

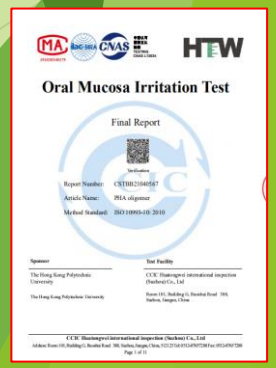
Antiviral Performance (20 mg/mL) (ASTM E1052-20)					
Index/Virus	COVID-19 (20min)	H1N1 (1min)	H1N1 (1h)	H3N2 (1min)	H3N2 (1h)
Inactivation rate	> 99.99%	> 99.9%	> 99.99%	> 99.9%	> 99.99%
Inactivation index	> 4	> 3	> 4	> 3	> 4





Skin irritation (ISO 10993-10: 2010, 100mg/mL)		
Index/Position	Oral mucosa of hamster	Vagina of white rabbit
Irritation index	0.7	0.7
Irritation reaction	negligible	negligible





BLESTAR Antimicrobial Spray:

BLESTAR ® EVER ECOLAR®

Traits:

- Fully biodegradable, low carbon emission.
- Broad-spectrum antiviral/antimicrobial property.
- Non-toxic and non-allergenic.
- Excellent deodorant property
- Effective spray against bed bugs, and mites
- Simple preparation and cost-effectiveness.
- Stable and durable.

Applications:

- Skin disinfection
- Disinfection of the surface of small objects

Specification:

- Original concentration: 50%
- pH: 4~6
- Cost: 12 Euro/kg
- Usage: dilute into 10% for spraying, i.e. original solution: water = 1:4

Awards

- **2023 Geneva International Exhibition of Inventions - Gold Medal**
- **2023 FITMI - Asia International Innovative Invention Award - Gold Award**
- **2023 Hong Kong 5th Hong Kong Innovation Day - third place**
- **2023 Hang Seng x PolyU Sustainable Future Challenge: Textile & Fashion - 1st Runner Up**
- 2020 Hong Kong Environmental Excellence Awards Excellence Award
- 2018 R&D 100 Awards - Special Recognition Award (Green Tech) - Bronze Award
- 2016 Hong Kong Green Innovations Awards - Silver Award

Contact Us

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