The most ADVANCED protection
for your loved ones

PHOTOSENSITIZING

Backed by Science

24/7 all round protection from new germs!

Forms a thin and invisible layer of protection, killing new germs from forming on the protected surfaces…

A brief info

The current pandemic is the biggest black swan event of our time and has challenged this generation, leading to millions being infected ad hundred of thousands of deaths.

Unfortunately, there is no reliable treatment or vaccine or treatment at the moment that can destroy the microbe in seconds. Viruses like Covid-19, HFMD, H1N1, etc, are extremely virulent They can stay in the air and surface for prolong periods and will not inactivate easily. Presently, the only known way is through toxic chemicals or increasing oxygenation (heat).

Currently, 90% of the disinfectants in the market only **INHIBIT** the virus. Many products claim anti-microbial efficacy of 24hrs. This is only ‘inhabitation’ period. Other products which may traumatize and damage the pathogens may be toxic or slow time to efficacy (couple of minutes to more than an hour)

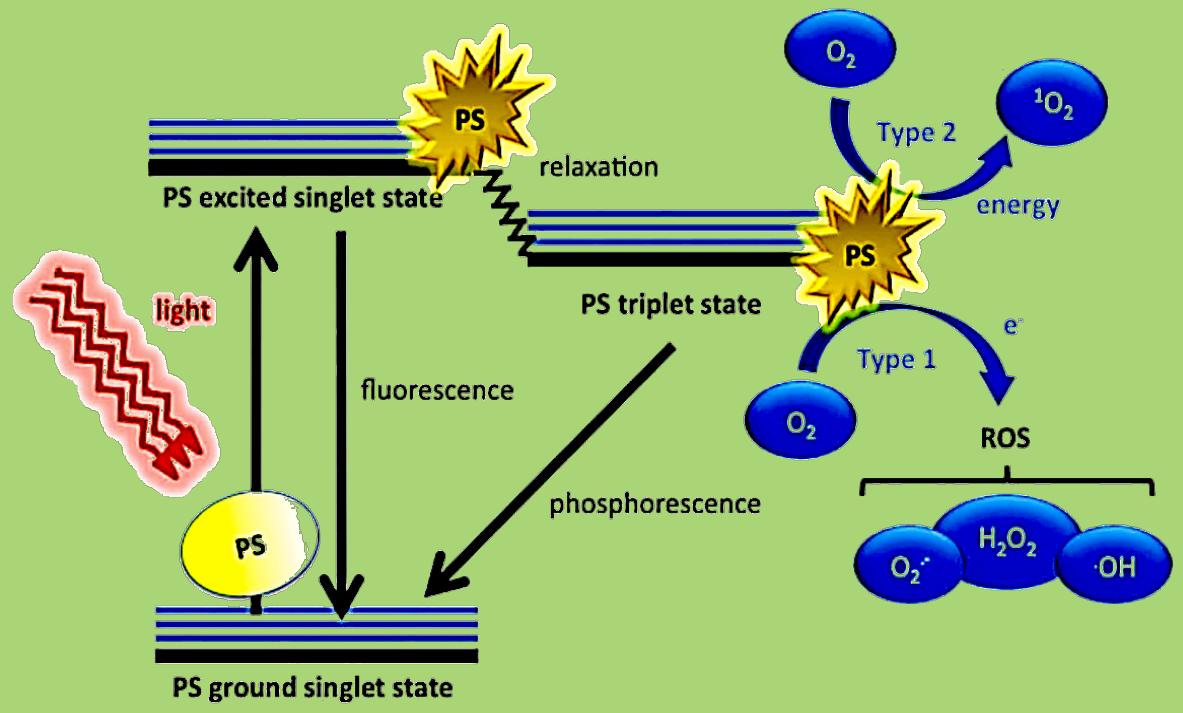
How G3Tech technology works

Our technology is a photosensitiser (PS) that is able to kill 99.9999% of bacteria and viruses on contact.

The PS does not contain toxicity and does not use toxicity to kill germs. Instead, it uses short and rapid bursts of Oxygen (O2) to effectively kill viruses and bacteria, leaving the microbes with absolutely no chance of survival.

When light (any type, including natural/ indoor) is present, our PS will trigger a reaction with molecular oxygen. The process converts into energy and excited singlet state oxygen which will destroy the microbes.

Due to the dual mechanism in our technology, our PS works without light too.



ADVANTAGES OF G3TECH TECHNOLOGY

Dual Mechanism:
Photodynamic antimicrobial (PDA); functions with light irradiation;
Cationic antimicrobial (CA): functions with or without light irradiation

High Efficacy:
High antimicrobial efficacy: >99.99% within 2 mins

Broad Spectrum:
Effective to kill a broad spectrum of microbes including bacteria, spores and fungi

Safe & Non-toxic:
Near food grade. Non chemical base and not rely on toxicity to kill germs

Regenerative:
Regenerate through light source and non-diminishing in use. Non-antibiotic resistant

Areas of use: Effective under sunlight, indoor or natural lights, or without light source

Non-drug resistant:
Does not cause drug resistance due to rapid action and multiple attacking sites on the microbes

Advantages

- A High amount of oxygen products generated (in thousands) per molecule
- Effective **immediately** against drug-resistant bacteria
- Effective to **kill** other pathogens, including fungi, viruses and parasites
- Destruction of biofilm produced by pathogens
- Destruction of bacteria endotoxin, reducing endotoxin-induced complications such as sepsis
- Does not cause drug resistance due to rapid action and multiple attacking sites on pathogens

Analysis of other current known technology out there that claims to kill viruses

Alcohol & chemicals eg. Hydrogen Peroxide, QAC

Efficacy: Depending on concentration, usually 60%-99% in ½ minute

Safety: Small amount is safe for consumption. On its own, it is toxic, fatal when ingested, flammable/spontaneous combustion when in contact with organic materials, irritation and corrosion if applied frequently to the surface

Function: Only kills some family of pathogens
Easily available
Hospital grade
Instant dry

Drawbacks: Evaporates quickly and not long lasting
Caustic, corrosive to surface and skin
Some virus may be resistant
Mixed with other chemicals may have elements of toxicity release
Non porous surface only
Pungent and harmful to air circulation. Irritate respiratory system
Harmful to environment

Silver ion / Nano

Efficacy: 60% / 60min

Safety: Dangerous to users when Nano particles are inhaled or consumed or when particles contact open wounds or infections

Function: Only kills some family of pathogens; no virus yet

Catalytic response of nano materials is far superior than other products

Good medical benefits by entering biological tissues to treat wounds and infections

Can block UV light

No stain, odourless

Speed up reaction as they have high surface area to volume ratio

Works on both porous and non-porous surfaces

Drawbacks: Side effects on humans varies

Since particles are small, they may cause adverse biological effects

Penetrate into biological barriers and may damage human and animal health

Non-lasting

Metals
(Copper, Zinc)

Efficacy: 60% / 30min

Safety: Dangerous when inhaled

Need to work with solvents and usually bears toxicity after the mix

Function: Long history as infection killing agent
Only kill some families of pathogens
Ineffective on some viruses
Known as molecular oxygen grenade
Works on non-porous surface

Drawbacks: Expensive
Non-lasting

Oxidation eg.
Titanium Oxide

Efficacy: 81.14%/60min to 90%/60min

Safety: Side effects on health

Function: Kills and decompose microbes including spores and VOCs
Purifies air, odourless
Coating is transparent
Can be applied to all surfaces

Drawbacks: Some level of toxicity
Corrosion
In mice study, it induces emphysema and lung redness. Also affected the glial cells in the brain
Environmental pollution
Possible carcinogenic
Increases skin aging
Need specialised equipment to carry out application
Non-lasting

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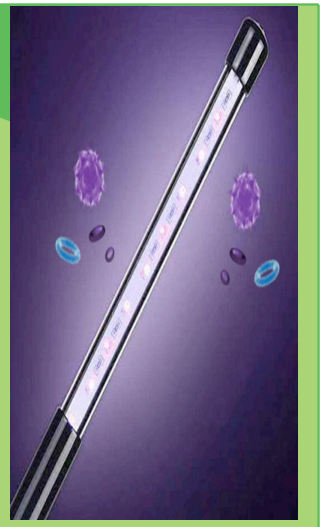


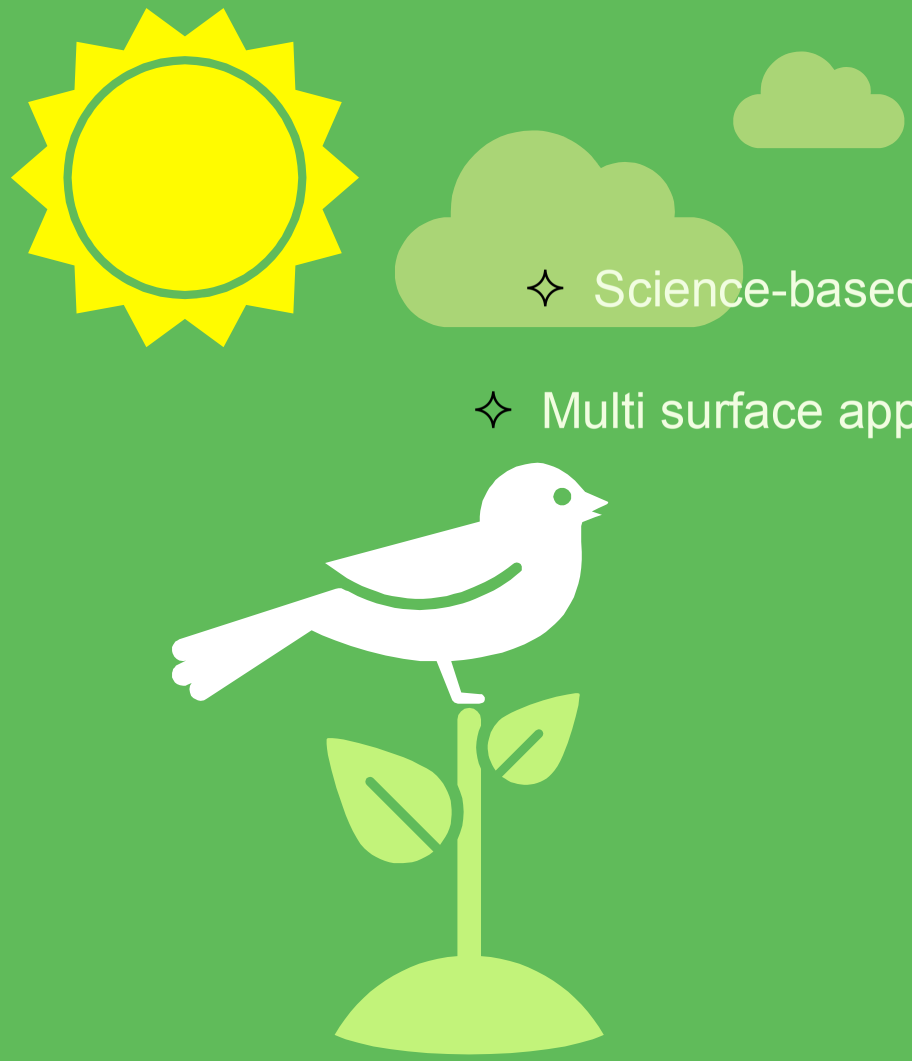
UV Light & Ozonization

Efficacy: 99.99%/30 min

Safety: Can damage human skin and surfaces

Function: Kills Covid-19 and some families of pathogen
Deodorises
50 times more effective than alcohol
No toxic residue
Kills airborne microbes

Drawbacks: Too much may cause chronic respiratory infection
Warnings issued by FDA
Carcinogen causing
Irritation to breathing passaged
Can cause headaches, skin irritation and retinal damage
Risk of skin cancer
Need specialised equipment to carry out applications



Unique Selling Points

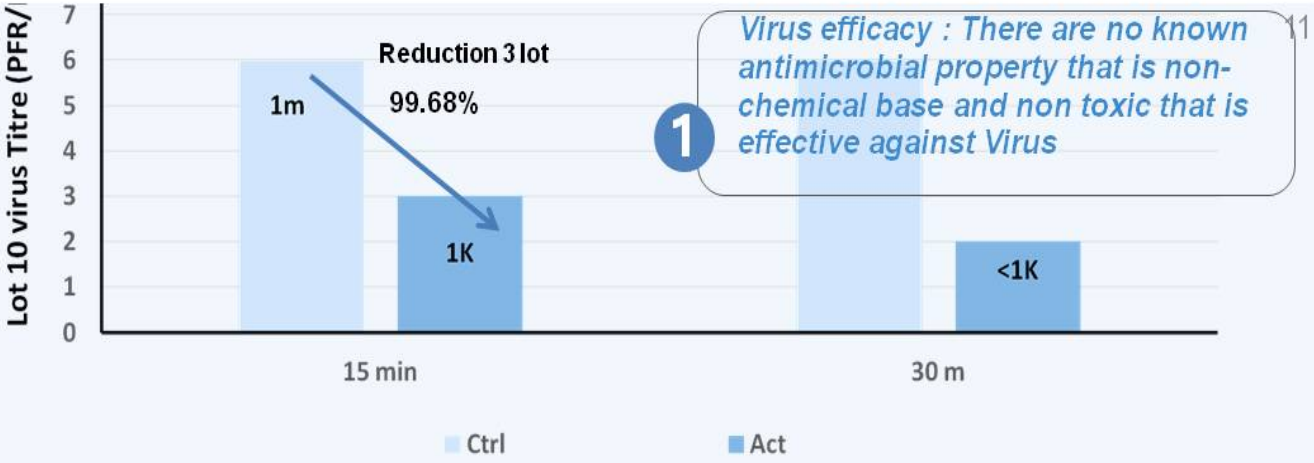
- Natural. Plant extracts, non-caustic
- Class A viricide. Instant kill. 6 log kill
- Science-based technology with lab tests from prestigious entities
- Harvard Technology
- Multi surface application (Wood, electronics, metal, upholstery, etc)
- FDA and CE certified
- Odourless and deodorises
- Long lasting and continuous results
- No stains or dye on surfaces and fabrics
- No residue
- Multi-functional
- Hypoallergenic
- Food and health grade
- Long-lasting
- Eco-friendly
- Not effected by humidity

Efficacy in microbe killing

01

Virus test – IC50 (EV-A71) – Only known non toxic (LD5K) antimicrobial solution that kill virus

Test conducted by Singapore National University hospital



Virus efficacy : There are no known antimicrobial property that is non-chemical base and non toxic that is effective against Virus

1

11

EV-A71 IC test by NUS Medical school

Results • Both 15 mins and 30 mins showed inhibition comparing to the controls. 15 mins showed a 2.5 logs inhibition, while 30 mins showed in excess of 2.5 log inhibition.

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1

100% (6 logs) **KILLING** efficacy against virus in solution

Efficacy in microbe killing

01 PS antimicrobial test result

Standard pathogenic bacteria	Control group	Killing logarithm	Standard for killing logarithm
Candida albicans	II, physiological saline + PS solution	4.37	4
Staphylococcus aureus	II, physiological saline + PS solution	5.46	5
Escherichia coli	II, physiological saline + PS solution	6.10	5

SA, E.coli, Candida

Antibacterial test data for PS antimicrobial system, indoor natural light, action time of 2 min (refer to China skin and mucous membrane disinfectant standards)

Strain number (Hospital wild drug-resistant bacteria)	Natural light 2 min	Natural light 5 min	Natural light 10 min	Number of recovered bacteria (cfu/mL)
QY20160127 MRSA	>5	>5	>5	4.4×10^7
	>5	>5	>5	8.1×10^7
QY20160331 MRSA	>5	>5	>5	3.1×10^7
	>5	>5	>5	5.0×10^7
QY20160322 MRSA	>5	>5	>5	5.6×10^7
	>5	>5	>5	6.1×10^7

MRSA

killing efficiency of PS antimicrobial system against standard pathogenic bacteria and hospital wild drug-resistant bacteria MRSA meets the China disinfectant standard requirements.

Remarks: based on Qing Dao CDC test report

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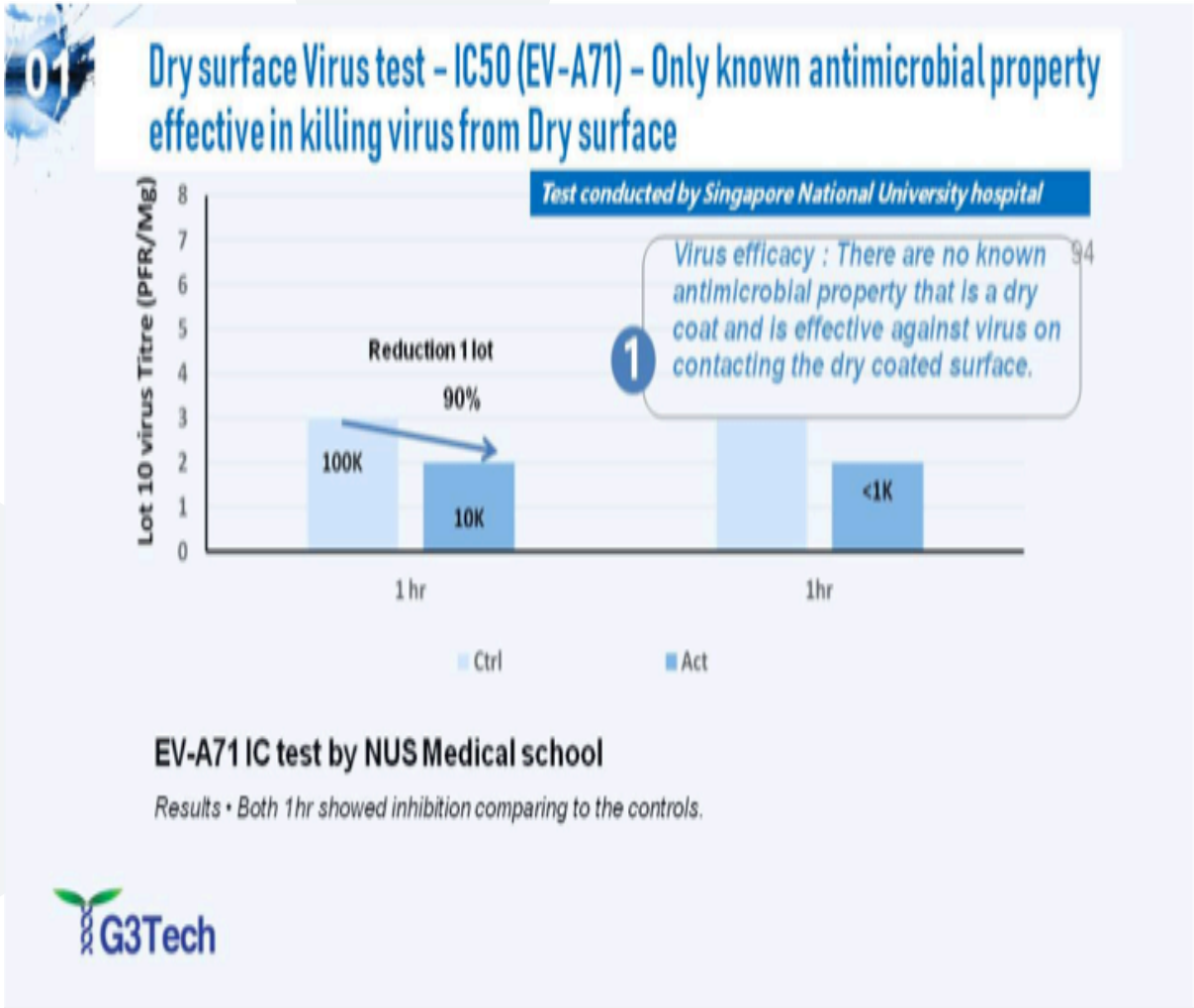
2

99.9999% (6 logs) KILLING efficacy against bacteria on both solution and from *hard coated surface*

Efficacy in microbe killing



3

90% (1log) KILLING efficacy against virus from coating on hard surface

Safety and toxicity test (safer than table salt)

Safe , Non-toxic , Non-irritation

CDC Tested

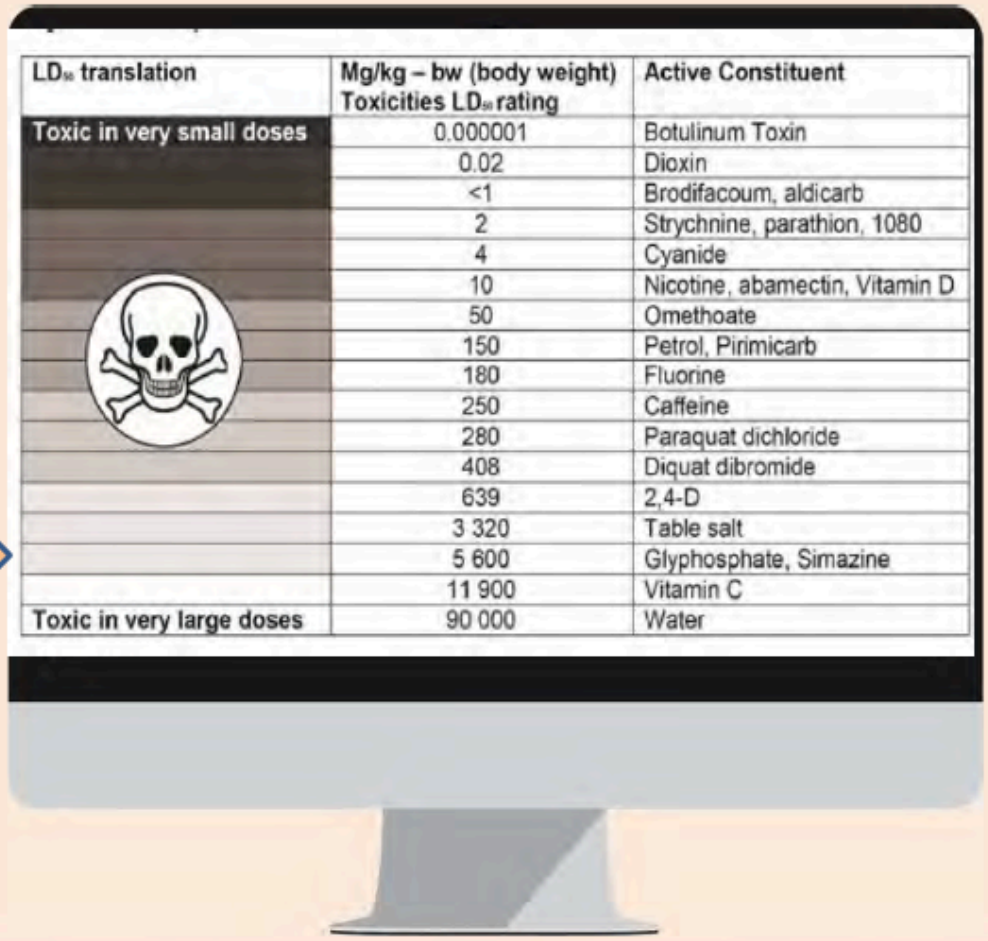
Safety test at Qingdao Center for Disease Prevention and Control (CDPC) in China (indoor natural light)

>LD5000

Acute oral: essentially non-toxic, LD50 >> 5000 mg/kg

Mutagenicity

Mutagenicity test (Mouse bone marrow polychromatic erythrocyte micronucleus mutation): negative.



LD_{50} translation	Mg/kg – bw (body weight) Toxicities LD_{50} rating	Active Constituent
Toxic in very small doses	0.000001	Botulinum Toxin
	0.02	Dioxin
	<1	Brodifacoum, aldicarb
	2	Strychnine, parathion, 1080
	4	Cyanide
	10	Nicotine, abamectin, Vitamin D
	50	Omethoate
	150	Petrol, Pirimicarb
	180	Fluorine
	250	Caffeine
	280	Paraquat dichloride
	408	Diquat dibromide
	639	2,4-D
	3 320	Table salt
	5 600	Glyphosphate, Simazine
	11 900	Vitamin C
Toxic in very large doses	90 000	Water

Near Edible Grade

Acute skin irritation: no irritation

Acute eye test

Acute eye irritation: no irritation

Acute Skin test

Skin allergy: slight irritation

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Certification

SGS

Test Report Report No: QDAFN13090221B Date: Oct 18 2013

Client name: Sundynamic Technology Ltd
Client address: Room 801, Westwind, building One Qingdao Laoshan zhuzhou Lu 153#
Sample name: PM2.5 anti-superbug Filter
Sample Batch No.: /
Product Date: /
Manufacturer: /

Above sample(s) was/were submitted and certified by the client, SGS quoted the information with no responsibility as to the accuracy, adequacy and/or completeness.

SGS Sample No.: QDAFN13090221B
SGS reference No.: QZAFN13090195
Date of sample received: Sep 23 2013
Testing period: Sep 26 2013 – Oct 18 2013

TEST(S) REQUESTED:
Selected test(s) as requested by applicant

TEST METHOD(S):
AATCC 100-2012 Antibacterial Finishes on Textile Materials: Assessment of

TEST ORGANISMS:
Methicillin Resistant Staphylococcus aureus (MRSA) ATCC 33591

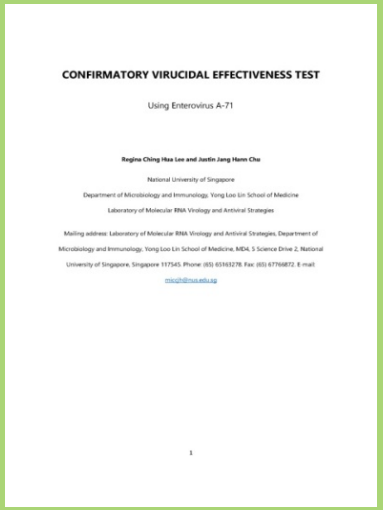
TEST RESULT(S):
Please refer to the next page(s)

The results shown in this test report refer only to the sample(s) tested.

SGS Authorized Signature

SGS-CSTC Standards Technical Services Co., Ltd. Qingdao Branch Page 1 of 3 RAND: 2331727

1 **SGS**
MRSA efficacy Test at >99.999%



CONFIRMATORY VIRUCIDAL EFFECTIVENESS TEST

Using Enterovirus A-71

Regina Ching Hsa Lee and Justin Jang Hann Chu

National University of Singapore

Department of Microbiology and Immunology, Yong Loo Lin School of Medicine

Laboratory of Molecular RNA Virology and Antiviral Strategies

Mailing address: Laboratory of Molecular RNA Virology and Antiviral Strategies, Department of Microbiology and Immunology, Yong Loo Lin School of Medicine, MD4, 5 Science Drive 2, National University of Singapore, Singapore 117545. Phone: (65) 65163278. Fax: (65) 67766872. E-mail: micjh@nus.edu.sg

1

2 **NUS Medical School**
Virus efficacy Test at 100%

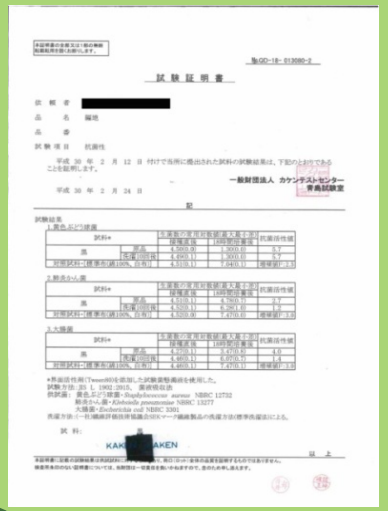
广东省微生物分析检测中心
GUANGDONG DETECTION CENTER OF MICROBIOLOGY

分析检测报告
REPORT FOR ANALYSIS

报告编号 Report No.: 2015FM5922
样品名称 Name of Sample: 绿精灵光能抗菌防霉纱
委托单位 Applicant: 青岛阳光动力生物医药技术有限公司
检测地点 Place for Test: 广东省微生物分析检测中心

地址 Address: 广州市先烈中路 100 号大院 59 号楼 Building 59, No.100 Central Xian Lie Road, Guangzhou, China
邮政编码 Postcode: 510070
电话号码 Tel: (020)87137666
传真号码 Fax: (020)87137668
网址 Website: www.gddcm.com

3 **China Detection center for Microbiology**
Efficacy Test at 100%



試験証明書

発行者 [redacted]
品名 繊維
品番
試験項目 抗菌性

平成 30 年 2 月 12 日 付けで当所に提出された試料の試験結果は、下記のとおりであることを証明します。

平成 30 年 2 月 24 日

一般財団法人 カケンテストセンター 青森試験室

試験結果

上皿色ふり綿菌

試料*		生菌数(個) 接種菌液	1時間培養後	抗菌活性値
無	部点	4.500(3)	1.500(3)	5.7
	洗濯10回後	4.240(1)	3.500(3)	3.7
対照試料（標準布)100%, 白布)		4.510(1)	7.240(1)	増殖値(-1.5)

上腕洗小人形

試料*		生菌数(個) 接種菌液	1時間培養後	抗菌活性値
無	部点	4.510(1)	4.500(3)	1.2
	洗濯10回後	4.520(1)	6.200(1)	0
対照試料（標準布)100%, 白布)		4.520(3)	7.770(1)	増殖値(-1.5)

上大腿部

試料*		生菌数(個) 接種菌液	1時間培養後	抗菌活性値
無	部点	4.720(1)	4.470(1)	1.0
	洗濯10回後	4.460(1)	6.970(1)	0
対照試料（標準布)100%, 白布)		4.460(1)	7.470(1)	増殖値(-1.0)

*界面活性剤(Tween80)を添加した試験菌液を使用した。
試験方法: JIS L 1902:2015, 菌液吸収法
供試菌: 黄色ぶどう球菌・Staphylococcus aureus NBRC 12732
肺炎かん菌・Klebsiella pneumoniae NBRC 13277
大腸菌・Escherichia coli NBRC 3301
洗濯方法: 一社)繊維評価技術協議会SEKマーク繊維製品の洗濯方法(標準洗濯法)による。

試料: [redacted]

KAKEN

4 **Japan Microbiology Lab**
Efficacy Test at 99%

品質試験報告書

[redacted] 殿

試験番号 61018002899-1

2018 年 2 月 28 日

受付月日 2018年 1月 25日
品名・品番 抗菌防臭検測 82830123 ページ 2
数量

上海安繁紡織技術検査有限公司
一般財団法人 ボーケン品質評価機構
上海試験室
一般財団法人 ボーケン品質評価機構
上海試験室
TEL 021-5283-0011 FAX 021-5283-0061

BOKEN

[試験項目] 抗菌性試験
[試験方法] JIS L 1902 : 2015 菌液吸収法 準用
但し、洗濯方法は、JIS L 0217 103号 の試験方法による。
(洗剤は JIS 洗濯堅牢度試験用を使用)
生菌数の測定方法 : 混釈平板培養法
界面活性剤(Tween80)0.05%を添加した試験菌液を使用した。
なお、処理液後に上方培養時間を1時間にて行った。

[試験菌体] 黄色ぶどう球菌 Staphylococcus aureus NBRC 12732

[試験結果]

試料名		生菌数(個)	抗菌率(%)
標準試布	接種菌液	2.7×10^4	
	1時間後	2.9×10^4	
抗菌防臭検測 82830123 ページ 2 洗濯 0回	1時間後	29	99.9
〃 洗濯 10回	1時間後	7.4×10^2	97.4

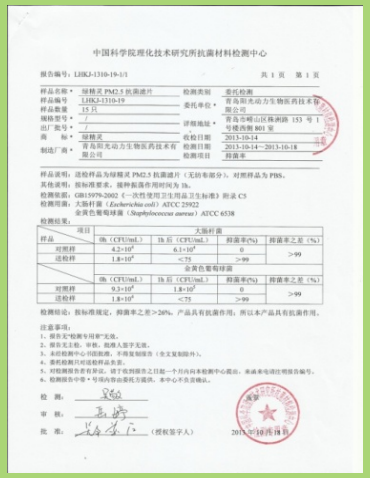
[備考]
ボーケン基準:抗菌性試験は基準値がないため判定より除外
試験結果は、下記式から算出した。

抑菌率 = (標準試布培養後菌数) − (試験試料培養後菌数) / (標準試布培養後菌数) ×100
(標準試布培養後菌数)
(検出試料)

1 BOKEN

本試験結果は ご提出の試料に対するものであって、他は各代表するものではありません。
本報告書の全部または一部の無断転載・転用は固く お断りします。
公印の無い報告書は正式なものではありません。

5 **Japan Industrial standard**
Garment Efficacy Test at 99%



中国科学院理化技术研究所抗菌材料检测中心

报告编号：LHKJ-1310-19-1/1 共 1 页 第 1 页

样品名称*	绿精灵 PM2.5 抗菌滤片	检测类别	委托检测
样品编号	LHKJ-1310-19	委托单位*	青岛阳光动力生物医药技术有限公司
样品数量	15 只		
规格型号*	/	详细地址*	青岛市崂山区株洲路 153 号 1 号楼西侧 801 室
出厂批号*	/		
商标*	绿精灵	收检日期	2013-10-14
制造厂商*	青岛阳光动力生物医药技术有限公司	检测日期	2013-10-14～2013-10-18
		检测项目	抑菌率

样品说明：送检样品为绿精灵 PM2.5 抗菌滤片（无纺布部分），对照样品为 PBS。
其他说明：按标准要求，接种振荡作用时间为 1h。
检测依据：GB15979-2002《一次性使用卫生用品卫生标准》附录 C5
检测菌株：大肠杆菌（Escherichia coli）ATCC 25922
金黄色葡萄球菌（Staphylococcus aureus）ATCC 6538

检测结果：

项目	大肠杆菌			
样品	0h（CFU/mL）	1h 后（CFU/mL）	抑菌率(%)	抑菌率之差（%）
对照样	4.2×10^4	6.1×10^4	0	>99
送检样	1.8×10^4	<75	>99	
	金黄色葡萄球菌			
	0h（CFU/mL）	1h 后（CFU/mL）	抑菌率(%)	抑菌率之差（%）
对照样	9.3×10^4	1.8×10^5	0	>99
送检样	1.8×10^4	<75	>99	

检测结论：按标准规定，抑菌率之差>26%，产品具有抗菌作用，所以本产品具有抗菌作用。

注意事项：
1. 报告无"检测专用章"无效。
2. 报告无主检、审核、批准人签字无效。
3. 未经检测中心书面批准，不得复制报告（全文复制除外）。
4. 委托检测只对送检样品负责。
5. 对检测报告有异议，请于收到报告之日起一个月内向本检测中心提出，来函来电请注明报告编号。
6. 检测报告中带*号项内容由委托方提供，本中心不负责确认。

检测：吴松
审核：高涛
批准：（授权签字人）
2013 年 10 月 19 日

6 **China Academic of Science**
Efficacy Test at 99%

OUR RANGE OF PRODUCTS

Our range of Products

- Hand Sanitizers
- Disinfectant
- Sanitising Wipes
- Fabric Softener (with antiviral, antimicrobial coating booster
- Paint Coat
- Multi-functional spray coating (water and solvent based) for different surfaces
- Aqua Spray Coat
- Anti-microbial Fabric (Bed Linen, Socks, Non-woven fabrics, Uniforms)
- Anti-viral Plastic PET sheet
- Anti-viral Mask and Face Shield
- Anti-viral Plastic Cling Wrap
- Body Wash
- Microfibre Spray
- Water Filter
- Air Filter
- And many more

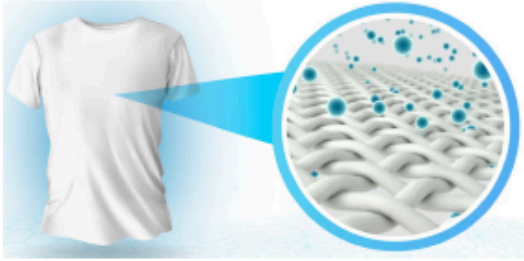
G3Tech


G3Tech
Sanitizing Wipes
50


G3Tech
Hand Sanitizer
Kills 99.99% of germs with Oxygen


G3Tech
Pocket Disinfectant
Kills 99.9% of viruses and bacteria


G3 SHIELD
FABRIC
SOFTENER
ANTIVIRAL
G3Tech




PINE & CO
Spring
BODY WASH
ANTIBACTERIAL
NATURAL MOISTURISING


G3Tech
G3 paint
Anti-Microbial
Air Purifying Paint


G3Tech
G3COATING-A
Multi-Functional
Anti-Microbial


G3Tech
G3 Aqua Coating
Anti-Microbial
Air Purifying Coating

G3Tech

For more information, please contact

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yeosuzy2@yahoo.com.sg