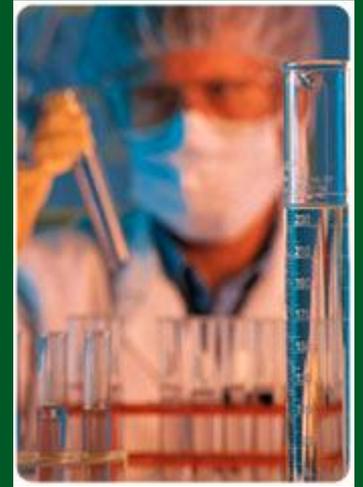


納米

Nano

納米是1984年
德國的 H. Gleiter
首先研製出來的



納米 Nano

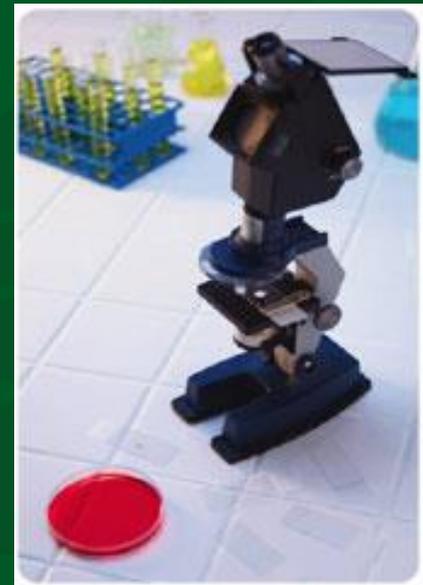
納米比負氧離子先進50年

海內外科技界廣泛認為

納米材料和技術是二十一世紀

最重要的材料和技術

是最有前途的科研領域



納米是什麼

納米是尺寸或大小的度量單位

是一米的十億分之一

四倍原子大小

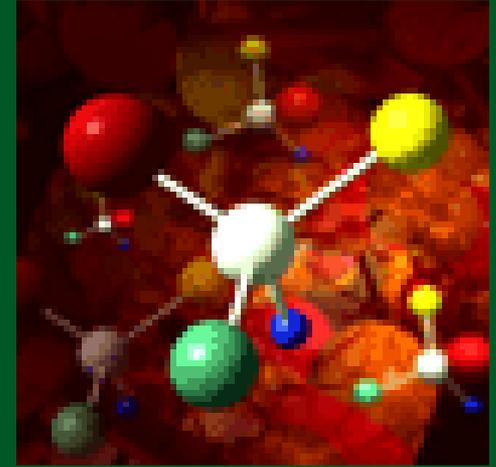
比頭髮小十萬倍



納米

知

納米技術



納米祇是一個長度單位

納米技術是指通過特定的技術
將某些材料納米化

納米材料

的

主要特點是什麼

納米技術 鐵具有極強的磁性、
不導電材料變成導電、
特殊的遠紅外線輻射、
強的紫外線反射、
強吸附性、
強殺菌力、
強催化作用等等。

銀



Silver

銀是貴金屬

銀的元素符號為 Ag。

貨幣和貴重飾品使用。

銀的**的**功效



選擇純銀的耳環



純銀耳環
可以避免新穿的耳洞
紅腫、過敏、發炎，
銀有消毒滅菌的功能。



銀的功效：

銀用來作為天然強力抗菌劑已經幾千年了。

從古代地中海時代和古亞洲文化時代，

就已經利用了銀的殺菌性，

儘管當時人們還沒有認識到。

銀的功效：

人們使用銀器來防止飲料變質；

在傷口和骨折的手術治療中
使用銀箔或銀片；

美國西部開荒者在沒有電冰箱的年代，
用一枚銀幣放入牛奶桶中來保鮮牛奶；

中國的宮廷祕方中
也常見用銀項鍊煎藥治病；



銀的功效：

李時珍的《本草綱目》
中對銀的功效總結為：

銀能-定身心、安五臟、
除邪氣、輕身體、延壽命。

公元前338年，
古代馬其頓人征戰希臘時，
用銀片覆蓋傷口來加速癒合；

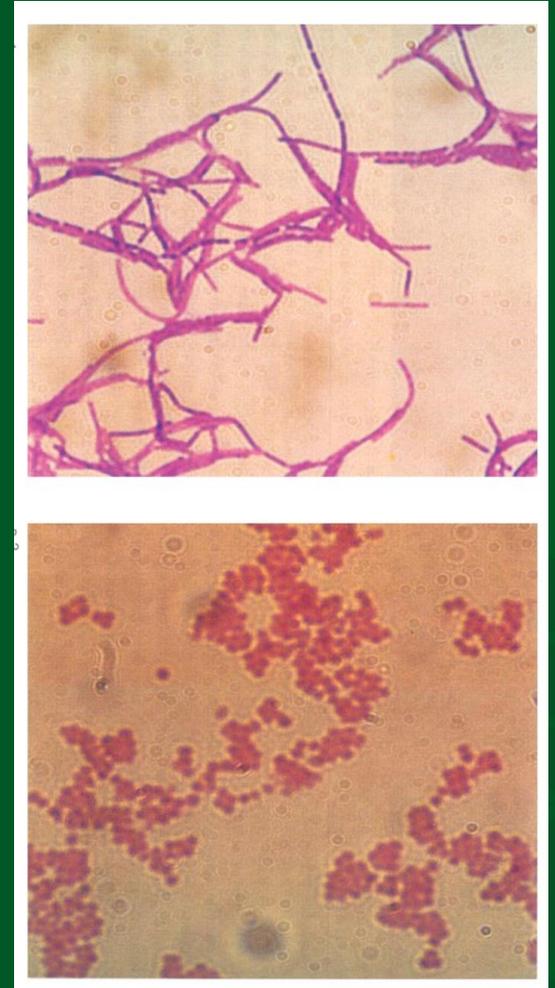
第一次世界大戰時
還用銀線縫合傷口，不易感染；

中國皇帝和大臣用銀筷進食；



納米銀對
大腸桿菌、
淋球菌、
沙眼衣原體等...

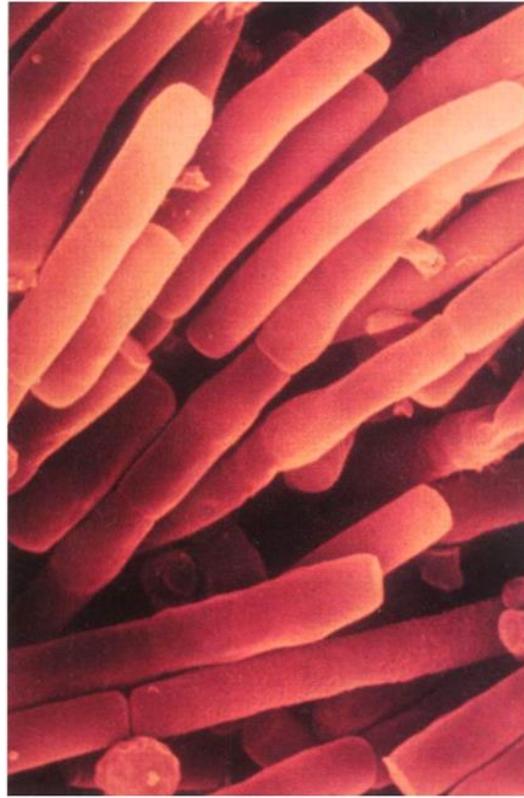
致病微生物都有
強烈的抑制和殺滅作用，
而且不會產生耐藥性。



細菌樣本



A.1

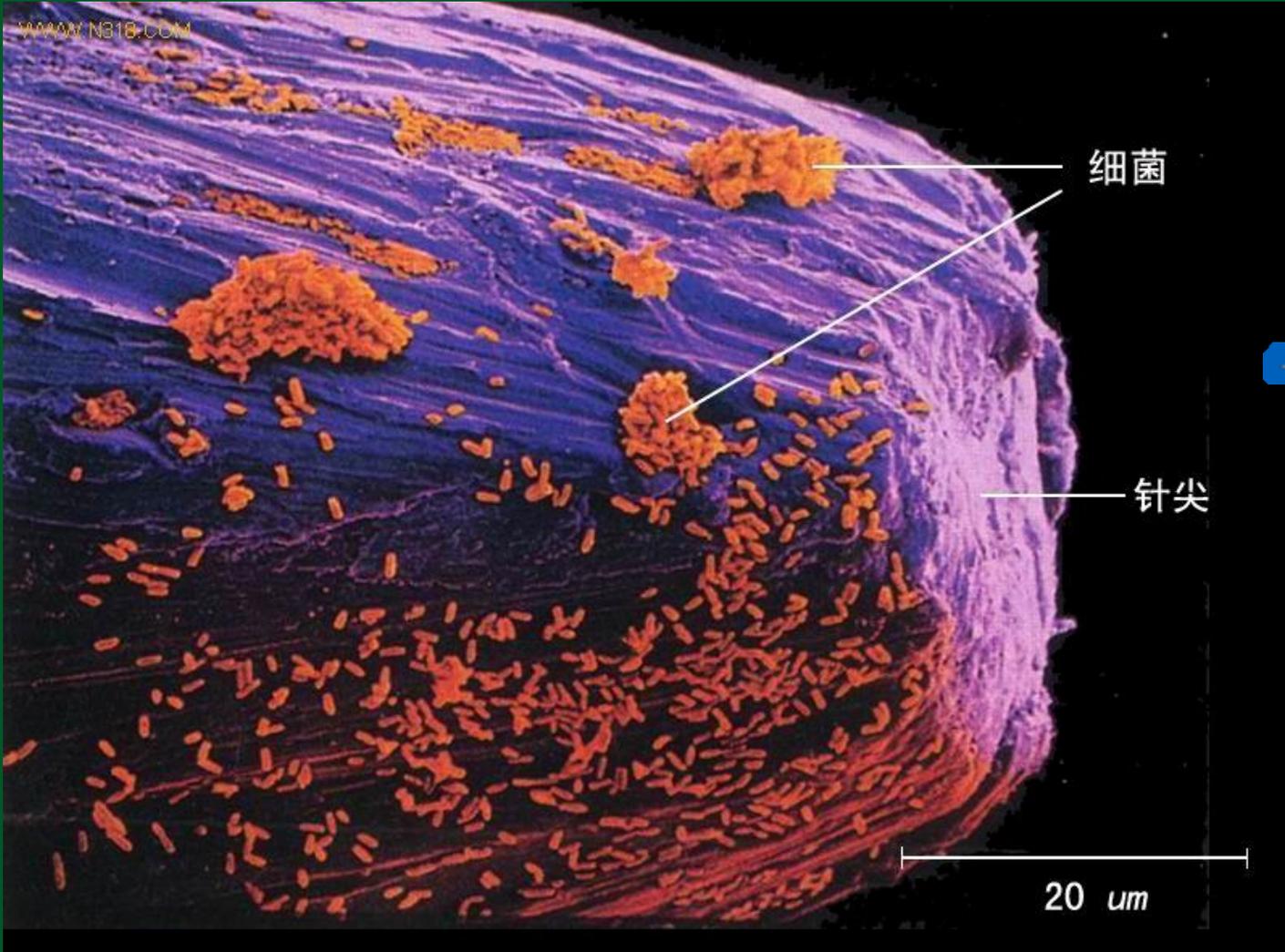


A.2



A.3

到處都有細菌



現代科學實驗證明
一種抗生素能殺死6種致病生物菌，
而銀能殺死650多種，
並能有效控制頑抗菌株，
但對人體正常細胞無害。

在實驗室裏，科學家尚未發現哪一種微生物在6分鐘內能不被銀殺死。

銀一直被各國科學家認為是最理想、最可靠的殺菌劑，

但由于某種原因

銀在醫療領域的作用受到了極大的限制。

所以，

銀的天然抗菌劑特性沒有被人們充分利用。

科學界發現銀的效能包括：

超強的殺菌力

可殺死650多種有害菌

維持人體內分泌系統的平衡，

阻斷電磁波，發送遠紅外線、

釋放陰離子、抗細菌、

抗黴菌等...

科學界發現銀的效能包括：

《人體與電》的作者
羅伯特貝克博士通過研究發現

人體的免疫力很大程度上依賴於銀

如果體內的銀含量低於

標準水準 0.0001%

患病的可能性就會增高

納米銀

如何杀菌

How NANO SILVER Eliminate Germs Effectively

纳米银

菌體

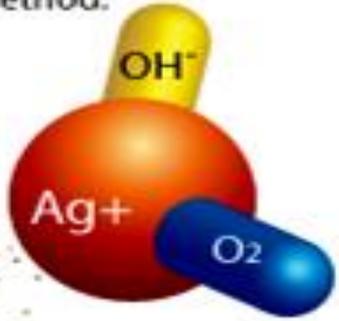
使菌體
窒息而死



Nano Silver is highly toxic to germs while relatively non-toxic to human cells. It allows Ag⁺ ions to easily penetrate cells of microorganisms and eliminating them. It's ability to affect more molecules prove to be more effective than the conventional germs elimination method.



Germs Destroyed



Nano Silver sterilizes and sanitizes the surface, re-assemble after killing the germs; and continuously eliminating more germs. This makes the surface free from bacteria and thus providing healthy sleep always.

納米銀

純天然

綠色產品

銀不是有機合成藥物

是天然銀元素的單質

納米銀

安全性

安全性：

抗生素的殺菌過程會對機體臟器造成損傷，是需要控制使用的產品。

動物試驗表明，納米銀即使用量達到標準劑量的幾千倍，受試動物也無中毒表現。

在兔的皮膚刺激實驗中，也沒有發現任何刺激反應。

納米銀離子的安全性
是國際醫學界公認的

因為銀元素本來就是
人體必須的重要元素之一

在美國納米銀的安全性
被認為是和食品同級別

納米銀

環保性

產品的生產與使用
對人類生存環境不產生任何影響

納米銀

滲透性強

納米膠銀具有超強的滲透性

可迅速滲入皮下2mm 殺菌

納米銀 修復再生

納米膠銀可促進傷口癒合，
促進受損細胞的修復與再生，

去腐生肌，
抗菌消炎改善創傷週圍組織的微回圈，

有效地活化並促進組織細胞的生長，
加速傷口的癒合，減少疤痕的產生。

納米銀安全無毒

《本草綱目》中記載：生銀，無毒；

美國公共衛生局1990年

《關於銀毒性的調查報告》

銀對人體無明顯毒副作用；
是最安全的用藥方式。

納米銀 無耐藥性

納米銀獨特抗菌機理
可迅速直接殺死細菌，
使其喪失繁殖能力，
因此，無法生產耐藥性的下一代，
能有效避免因耐藥性
而導致反復發作久治不愈。

納米銀 VS 抗生素

項目	抗生素	納米銀
抗菌譜	只能對幾種細菌有抗菌作用	不受細菌的分類限制
耐藥性	易產生耐藥菌株	不會產生耐藥性
耐藥菌	無效	具有相同的殺菌作用
使用量	以mg計算	以 μg 計算
	$1\text{mg}=1000\mu\text{g}$	

CHEMICAL LABORATORY (MALAYSIA) SDN BHD (27822-K)

81-85 (2nd & 3rd Floor), Jalan SS2/2, Taman Bukit Emas, 47301 Petaling Jaya, Selangor Darul Ehsan, Malaysia.
Tel: 03-7803 2229, 7803 9582, 7803 0386 Fax: 03-7803 2303
E-mail: chq@chemlab.com.my Homepage: <http://www.chemlab.com.my>

ASSAYERS, ANALYTICAL CHEMISTS, MICROBIOLOGISTS AND INDUSTRIAL CONSULTANTS

Chairman & Managing Director
Date/ Dr. F.W. Kam C.Chem, FRSC, FRACI, FMC, FIST, FIM, FRSH, FBIM, FInst. Pst, FMOSTA

Directors: **Datin P.K. Wong** MRCh, MBIM, FInst.Pst, Dip NIDA
Marcus K.F. Kam B.E.(Hons), M.Sc., C. Chem, MRACI, MBA

CERTIFICATE OF ANALYSIS

Company : M/s. Acume Sdn Bhd
No.12, SS2/75,
47300 Petaling Jaya
Selangor Darul Ehsan.

Lab No: PJ-L/MS/3603/07

Page : 1 of 2

Sample Description : One (1) sample of Liquid
Sample Marking : Nano Silver 10 ppm
Date Sample Received : 2nd January 2008
Date Analyzed : 2nd January 2008 – 7th January 2008
Date Reported : 7th January 2008

BACTERIOLOGICAL ANALYSIS:

Challenge Test

Procedure :

- Prepare inoculum of organism below at 10^5 cfu/ml.
 - Staphylococcus aureus* ATCC 6538
 - Escherichia coli* ATCC 8739
 - Pseudomonas aeruginosa* ATCC 9027
- Prepare the sample/product to three (3) portions (9 ml each) and inoculate 1 ml of each inoculum above into product (this is 1:10 dilution) respectively and allow it to contact for 1 minute and 24 hours.
- Dilute the sample and proceed with serial dilution by transferring 1 ml from 1:10 dilution into 9 ml sterile saline up to necessary dilution.
- Pipette 1 ml of each dilution into duplicate plates.
- Pour approximately 15-20 ml of Tryptic Soy Agar into all plates and allow it to solidify.
- Incubate all plates at 35°C for 48 hours and count the colonies observed after completion of incubation.
- Initial count for each inoculum was also recovered.
- Calculate the percentage of kill for all organisms as follows :

$$\frac{\text{Initial Count} - \text{Count of organism survive}}{\text{Initial Count}} \times 100\%$$


Salma Binti Arifin
B.Sc.(Hons) Microbiology
Microbiologist

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Taman Johor Jaya, 81100 Johor Bahru,
Johor Darul Takzim, Malaysia.
Tel: 07-3543208 (4 Lines)
Fax: 07-3543227

PENANG BRANCH
298-1-2-3, Jalan Datar Ismail Hasnam,
11900 Sungai Ara, Penang, Malaysia.
Tel: 04-6465277
04-6467792
Fax: 04-6466260

KUCHING BRANCH
Lot 8805-8806, 3rd Floor, Pending Court,
Jalan Kuning Lee Bank,
93450 Kuching, Sarawak, East Malaysia.
Tel: 082-343841
Fax: 082-343840

SINGAPORE BRANCH
520, Balestier Road # 06-01,
Leong On Building,
Singapore 329653.
Tel: (65) 62538122
Fax: (65) 62504837

THAILAND BRANCH
282 Rantree Office Garden, 83 Building, 3rd Floor,
Sri Sornvej 4, Rama 9 Road, Bangkok, Huayweang,
Bangkok 10310 Thailand.
Tel: (662) 719-6488-92
Fax: (662) 719-6483

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Lab No: PJ-L/MS/3603/07

Page : 2 of 2

Sample Marking : Nano Silver 10 ppm
Date Sample Received : 2nd January 2008
Date Analyzed : 2nd January 2008 – 7th January 2008
Date Reported : 7th January 2008

BACTERIOLOGICAL ANALYSIS:

Challenge Test

RESULTS :

Organism Tested	Contact Time	Initial Count, cfu/ml (A)	Count of survive organism, cfu/ml (B)	Percentage of kill, (A) – (B) x 100% (A)
<i>Staphylococcus aureus</i> ATCC 6538	1 minute	1.0×10^5	1.7×10^4	83.82%
	24 hours	1.0×10^5	1.0×10^1	99.99%
<i>Escherichia coli</i> ATCC 8739	1 minute	6.0×10^5	1.9×10^4	96.87%
	24 hours	6.0×10^5	0	100.00%
<i>Pseudomonas aeruginosa</i> ATCC 9027	1 minute	2.4×10^5	1.5×10^4	93.70%
	24 hours	2.4×10^5	0	100.00%

Test Method : In-House Method based on United States Pharmacopoeia 28


Salma Binti Arifin
B.Sc.(Hons) Microbiology
Microbiologist

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Bangkok 10310 Thailand.
Tel: (662) 719-6488-92
Fax: (662) 719-6483

殺菌檢驗報告

殺菌檢驗報告講解

RESULTS :

Organism Tested	Contact Time	Initial Count, cfu/ml (A)	Count of survive organism, cfu/ml (B)	Percentage of kill, $\frac{(A) - (B)}{(A)} \times 100\%$
<i>Staphylococcus aureus</i> ATCC 6538 葡萄球菌	1 minute	1.0×10^5	1.7×10^4	83.82%
	24 hours	1.0×10^5	1.0×10^1	99.99%
<i>Escherichia coli</i> ATCC 8739 埃希氏菌屬	1 minute	6.0×10^5	1.9×10^4	96.87%
	24 hours	6.0×10^5	0	100.00%
<i>Pseudomonas aeruginosa</i> ATCC 9027 假單胞菌	1 minute	2.4×10^5	1.5×10^4	93.70%
	24 hours	2.4×10^5	0	100.00%



Certifications – Sirim, UKM

TEST REPORT

REPORT NO. : 2007KL0862	PAGE : 2 OF 3
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Test Result

Sample : Nano Silver + Composite Solution
(Pam Technologies)

Experimental Condition:

1. Organism used : Escherichia coli ATCC 8739
2. Product Test Condition : Neat Concentration
3. Contact Time : 8 Minutes and 15 Minutes
4. Determination of Microbial Count : Pour Plate Method
5. Temperature of Incubation : 37 ± 1 °C for 48 hrs

No.	Organisms used	Initial count of test organism (cfu/ml)	Surviving of count test organism (cfu/ml)	Percentage killed of test organism
1.	Escherichia coli ATCC 8739			
	Contact time			
	a) 8 Minutes	5.4 X 10 ⁵	Less than 10	> 99.9
	b) 15 Minutes	5.4 X 10 ⁵	Less than 10	> 99.9


HAHNAS MAHBUT
 Head
 Chemical & Consumer Section
 SIRIM QAS International Sdn. Bhd.

TEST REPORT

REPORT NO. : 2007KL0862	PAGE : 3 OF 3
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Test Result

Sample : Nano Silver + Composite Solution
(Pam Technologies)

Experimental Condition:

1. Organism used : Staphylococcus aureus – ATCC 6538
2. Product Test Condition : Neat Concentration
3. Contact Time : 8 Minutes and 15 Minutes
4. Determination of Microbial Count : Pour Plate Method
5. Temperature of Incubation : 37 ± 1 °C for 48 hrs

No.	Organisms used	Initial count of test organism (cfu/ml)	Count of surviving test organism (cfu/ml)	Percentage killed of test organism
1.	Staphylococcus aureus ATCC 6538			
	Contact time			
	a) 8 Minute	5.9 X 10 ⁵	Less than 10	> 99.9
	b) 15 Minutes	6.6 X 10 ⁵	Less than 10	> 99.9


HAHNAS MAHBUT
 Head
 Chemical & Consumer Section
 SIRIM QAS International Sdn. Bhd.

Certifications



TEST CERTIFICATE **SANITIZED AG**

Bekaert Decoration Textiles NV
Deerlijksseweg 22
BE-8790 Waregem

Description of sample:

Sample number: 2007-0980-05 Received: 06.06.2007 T
Identification: LA-2007/0980 AP: 2007/044
Main Component: PES/CV
Appearance: Quality 97509
Field of Application: Ticking
Sanitized Products: Sanitized®
Declared quantity: 1.0%
Finishing Process(es): Padding
Finishing Parameter(s): dry at: 120°C - 4'
Additive Finish: MRN liq. 1g/l, Acetic acid 80% 1g/l
Type: -
Pretreatment: Original

Test results of the SANITIZED-laboratory:

Method:	Test point:	Growth:	Halo in mm:	Evaluation:
Determination of the bacteriostatic activity:				
ASTM E 2149-01	Staphylococcus aureus ATCC 6538	>4.2	>99,99%	very good effect
ASTM E 2149-01	Klebsiella pneumoniae ATCC 4352	>4.8	>99,99%	very good effect

SANITIZED AG

Burgdorf, 20.07.2007

Explanation of the results of an antimicrobial test carried out in accordance with the standards SN 106 920 or SAN BIC-1256:
Inhibition zone 0mm or more: the sample is fully protected against the growth of test organism and shows a good effect.
Weak growth: at least 95% of the sample surface is free of microbial growth.
Medium or total growth: the sample is insufficiently protected against the test organism and partially to completely covered with microbial growth.
SN 106 920: Including 3th pre-conditioning

ISO 9001 : 2000
Reg. Nr. 11719

Page 5 of 6



SANITIZED AG, Lyssachstrasse 95, CH-3401 Burgdorf/Switzerland, Phone +41 (0)34 427 16 16, Fax +41 (0)34 427 16 19



納米銀的應用

如今人們已將納米銀
廣範地應用到了生活的各行各業，

如家電、

床具、

醫藥、

化妝品等行業...



[About](#)
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SILVER NANO HEALTH SYSTEM

Washing Machine



Aircon

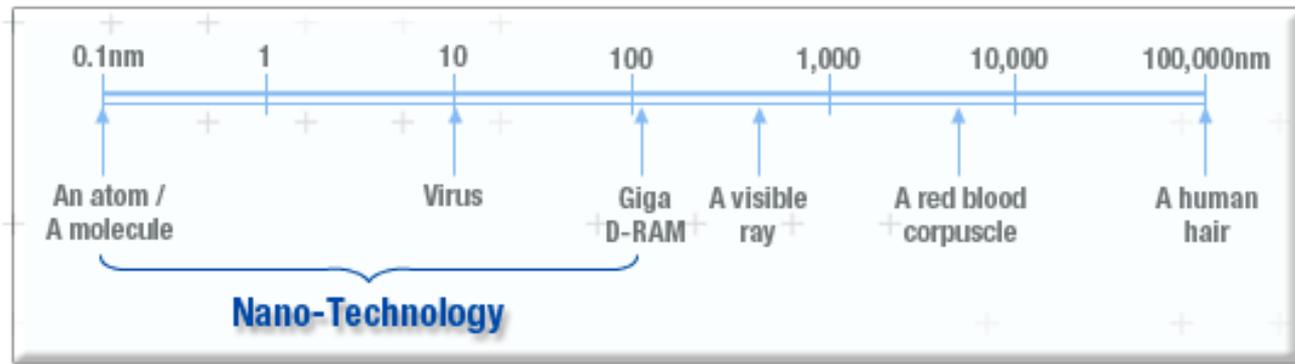


Refrigerator



Samsung Silver Nano

Samsung Silver Nano



Silver:

Silver Nano ions have proven their ability to sterilize over 650 types of bacteria and serve a better world up to you in style. Recent advancements in technology and increased consumer demand for health-promoting products are giving rise to many new items that use silver for highly effective sanitization so Samsung has developed a silver spoon for your appliances

Over 650 types of bacteria

Panasonic
ideas for life

发现~生活之蓝
Discover the Blue of Life

松下光动银离子家电组合



开启全方位家居洁净时代

- 松下光动银离子洗衣机
阿尔法系列
- 松下光动银离子系列冰箱
- 松下光动银离子变频空调



松下光动银离子，在蓝光的照射下，银离子的抑菌效果大幅度强化，广泛深入地抑制细菌生长。并率先运用到松下冰箱、空调、洗衣机上，三者构筑成全方位家居健康保护防线，有效净化食物、空气、衣服上黏附的细菌，环环相扣，连锁保护。

松下电器（中国）有限公司
松下电器全国服务热线：800-810-0781 手机用户可拨打：400-810-0781 网址：<http://panasonic.cn>

松下电器

松下电器 Panasonic

银离子家电组合

可殺滅650多種菌

GETHÁ

納米銀 天然乳膠床墊

可殺滅650多種菌



Nano Silver X3



SLEEP PHILOSOPHY

The world is no longer the same

Our daily life is ever increasingly affected by modern day living & lifestyle. As science and technology advances and as more and more bacteria and virus surfaces, GETHA innovated a natural and healthy solution.

Transforme is designed with your natural health & well being as the prime considerations.

Transforme, combining the latest NanoAg technology with GETHA's superior state-of-the-art latex foaming technology, has achieved the ultimate sleep protection for all.



Product Excellence Award 2014



Brand Excellence Award 2015



The Goodhouse award 2015





Only The Best From Mother Nature

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GETHÁ

實力+經驗+上等材料
=開創突破性的產品

1

十大精心改革

納米
科學技術
Nanotechnology

納米銀

持久抗菌效果
可殺死650多種細菌
擁有除臭功能

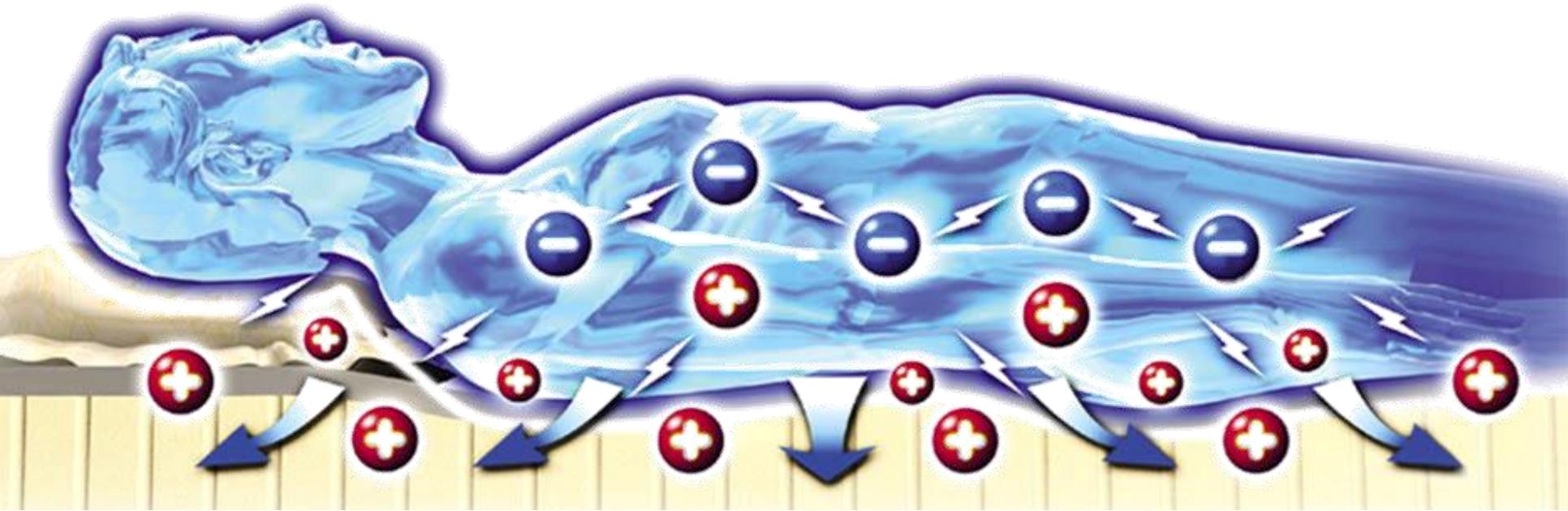
A **S** **P**TM

Anti **S**tatic **P**rotection

A防止-**S**靜電 **P**保障

三萬減至四千瓦特

30,000 volt reduces to 4,000 volt



Colloidal Silver

納米寶膠銀

用途廣泛

產品特效

納米寶膠銀製造機

主要是針對家庭用途

能有效殺滅650種以上有害細菌和如禽流感、肺結核、愛滋、肝炎等多種病毒。

廣泛適用於家庭的環境消毒，空氣清新，產品安全無毒，無刺激性氣味，長效廣譜快速殺滅細菌。

Colloidal Silver 的用途廣泛

噴洒到織物纖維中：

如制服、便裝、襯衫、內衣、睡衣、
襪子、床上用品、手帕、口罩、
濕巾、衛生巾、護墊、嬰兒尿布等...

可獲得抗菌、殺菌、消毒，
保護人體肌膚免受細菌侵入，預防皮膚病。

Colloidal Silver 的用途廣泛

食物：水果、果汁、牛奶、酒、蔬菜、肉類、海鮮等、可以保鮮、保純、抗菌、殺菌。

人體：頭髮、眼睛、臉、口、耳朵、肛門、下體、腳底、皮膚等，可以殺菌，止癢。

其它：器具、冰箱、汽車、冷氣、椅子、桌子、地板、地毯、洗手間、寢具等...
可以抗菌、殺菌、消毒。

可以徹底殺滅各種
危害人體健康的細菌和微生物，
消除異味，
保持室內空氣清潔。
還可以成為寵物殺菌除臭系列產品，
有效根除飼養寵物給人們帶來的煩惱。



CHEMICAL LABORATORY (MALAYSIA) SDN BHD (27822-K)

81-85 (2nd & 3rd Floor), Jalan SS2/22, Taman Bukit Ehsan, 47301 Petaling Jaya, Selangor Darul Ehsan, Malaysia.
Tel: 03-7803 2229, 7803 9582, 7803 0386 Fax: 03-7803 2303
E-mail: chq@chemlab.com.my Homepage: http://www.chemlab.com.my

ASSAYERS, ANALYTICAL CHEMISTS, MICROBIOLOGISTS AND INDUSTRIAL CONSULTANTS

Chairman & Managing Director :
Date/ Dr. F.W. Kam C.Chem, FRSC, FRACI, FMC, FIST, FIM, FRSH, FBIM, FInst, Pst, FMOSTA

Directors : Datin P.K. Wong MRSH, MBIM, FInst Pst., Dip NICA
Marcus K.F. Kam B.E.(Hons), M.Sc., C.Chem, MRACI, MBA

CERTIFICATE OF ANALYSIS

Company : M/s. Acume Sdn Bhd
No.12, SS2/75,
47300 Petaling Jaya
Selangor Darul Ehsan.

Lab No: PJ-L/MS/3603/07

Page : 1 of 2

Sample Description : One (1) sample of Liquid
Sample Marking : Nano Silver 10 ppm
Date Sample Received : 2nd January 2008
Date Analyzed : 2nd January 2008 – 7th January 2008
Date Reported : 7th January 2008

BACTERIOLOGICAL ANALYSIS:

Challenge Test

Procedure :

- Prepare inoculum of organism below at 10^5 cfu/ml.
 - Staphylococcus aureus* ATCC 6538
 - Escherichia coli* ATCC 8739
 - Pseudomonas aeruginosa* ATCC 9027
- Prepare the sample/product to three (3) portions (9 ml each) and inoculate 1 ml of each inoculum above into product (this is 1:10 dilution) respectively and allow it to contact for 1 minute and 24 hours.
- Dilute the sample and proceed with serial dilution by transferring 1 ml from 1:10 dilution into 9 ml sterile saline up to necessary dilution.
- Pipette 1 ml of each dilution into duplicate plates.
- Pour approximately 15-20 ml of Tryptic Soy Agar into all plates and allow it to solidify.
- Incubate all plates at 35°C for 48 hours and count the colonies observed after completion of incubation.
- Initial count for each inoculum was also recovered.
- Calculate the percentage of kill for all organisms as follows :

$$\frac{\text{Initial Count} - \text{Count of organism survive}}{\text{Initial Count}} \times 100\%$$

Salma Binti Arifin
B.Sc.(Hons) Microbiology
Microbiologist

THE ABOVE ANALYSIS IS BASED SOLELY ON THE SAMPLES SUBMITTED BY THE CUSTOMER

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JOHOR BAHRU BRANCH Wisma Kam, 52, Jalan Dendup 4, Taman Johor Jaya, 81100 Johor Bahru, Johor Darul Taklim, Malaysia. Tel: 07-3643328 (4 Lines) Fax: 07-3643327	PERANG BRANCH 298-1-2-3, Jalan Duta, Tamal Heahm, 11900 Sungai Ara, Penang, Malaysia. Tel: 04-6465777 04-6467912 Fax: 04-6466200	KUCHING BRANCH Lot 8805-8806, 3rd Floor, Pending Court, Jalan Kwong Lee Bank, 93450 Muarong, Seremban, East Malaysia. Tel: 082-343841 Fax: 082-343840	SINGAPORE BRANCH 520, Balestier Road # 06-01, Leng On Building, Singapore 329653. Tel: (65) 6226122 Fax: (65) 6250437	THAILAND BRANCH 282 Rattree Office Garden, 83 Building, 3rd Floor, Soi Sooravee 4, Rama IX Road, Bangkok, Bangkok 10310 Thailand. Tel: (662) 719-6488-92 Fax: (662) 719-6483
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殺菌檢驗報告

CHEMICAL LABORATORY (MALAYSIA) SDN BHD (27822-K)

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Page : 2 of 2

Sample Marking : Nano Silver 10 ppm
Date Sample Received : 2nd January 2008
Date Analyzed : 2nd January 2008 – 7th January 2008
Date Reported : 7th January 2008

BACTERIOLOGICAL ANALYSIS:

Challenge Test

RESULTS:

Organism Tested	Contact Time	Initial Count, cfu/ml (A)	Count of survive organism, cfu/ml (B)	Percentage of kill, $(A)-(B) \times 100\%$ (A)
<i>Staphylococcus aureus</i> ATCC 6538	1 minute	1.0×10^5	1.7×10^4	83.82%
	24 hours	1.0×10^5	1.0×10^1	99.99%
<i>Escherichia coli</i> ATCC 8739	1 minute	6.0×10^5	1.9×10^4	96.87%
	24 hours	6.0×10^5	0	100.00%
<i>Pseudomonas aeruginosa</i> ATCC 9027	1 minute	2.4×10^5	1.5×10^4	93.70%
	24 hours	2.4×10^5	0	100.00%

Test Method : In-House Method based on United States Pharmacopoeia 28

Salma Binti Arifin
B.Sc.(Hons) Microbiology
Microbiologist

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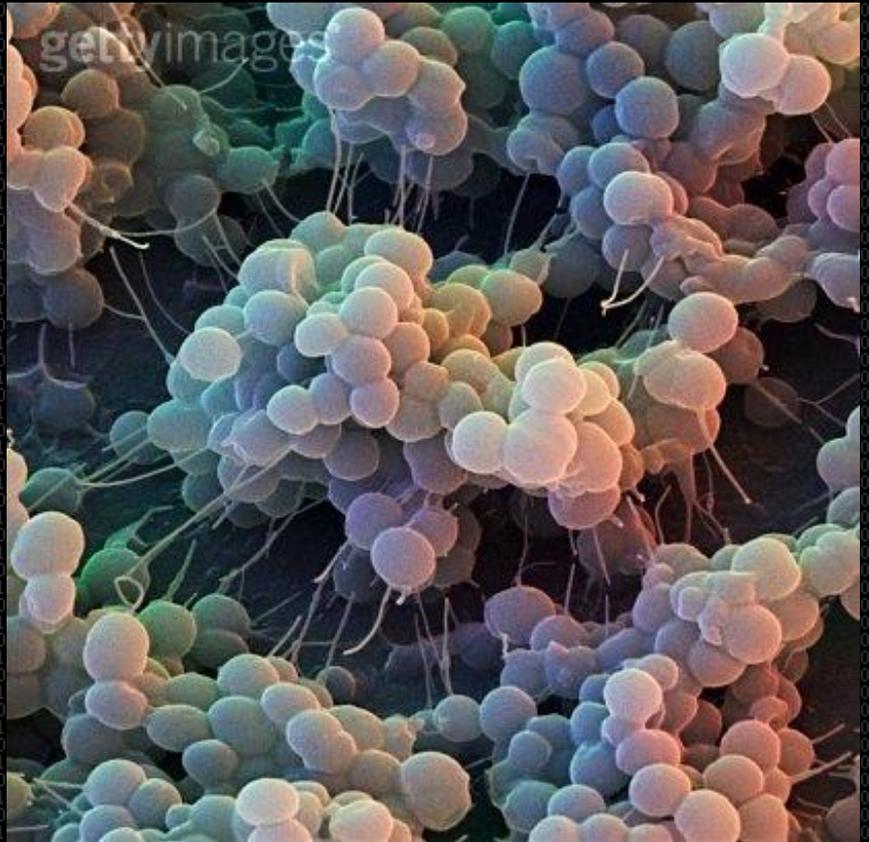
殺菌檢驗報告講解

RESULTS:

Organism Tested	Contact Time	Initial Count, cfu/ml (A)	Count of survive organism, cfu/ml (B)	Percentage of kill, $\frac{(A) - (B)}{(A)} \times 100\%$
<i>Staphylococcus aureus</i> ATCC 6538 葡萄球菌	1 minute	1.0×10^5	1.7×10^4	83.82%
	24 hours	1.0×10^5	1.0×10^1	99.99%
<i>Escherichia coli</i> ATCC 8739 埃希氏菌屬	1 minute	6.0×10^5	1.9×10^4	96.87%
	24 hours	6.0×10^5	0	100.00%
<i>Pseudomonas aeruginosa</i> ATCC 9027 假單胞菌	1 minute	2.4×10^5	1.5×10^4	93.70%
	24 hours	2.4×10^5	0	100.00%



葡萄球菌



非常可怕的顽菌



葡萄球菌 非常可怕的顽菌



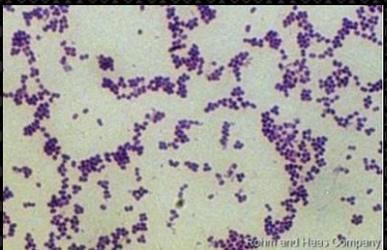


葡萄球菌 非常可怕的顽菌

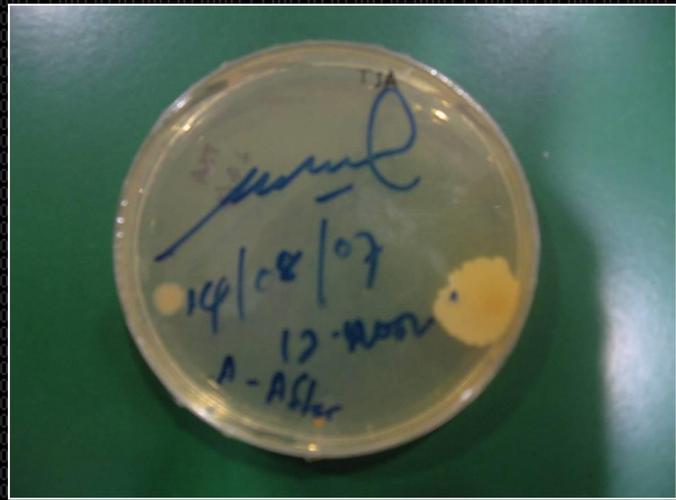
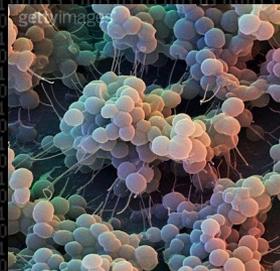




<i>Staphylococcus aureus</i> ATCC 6538	1 minute	1.0×10^5	1.7×10^4	83.82%
	24 hours	1.0×10^5	1.0×10^1	99.99%



葡萄球菌

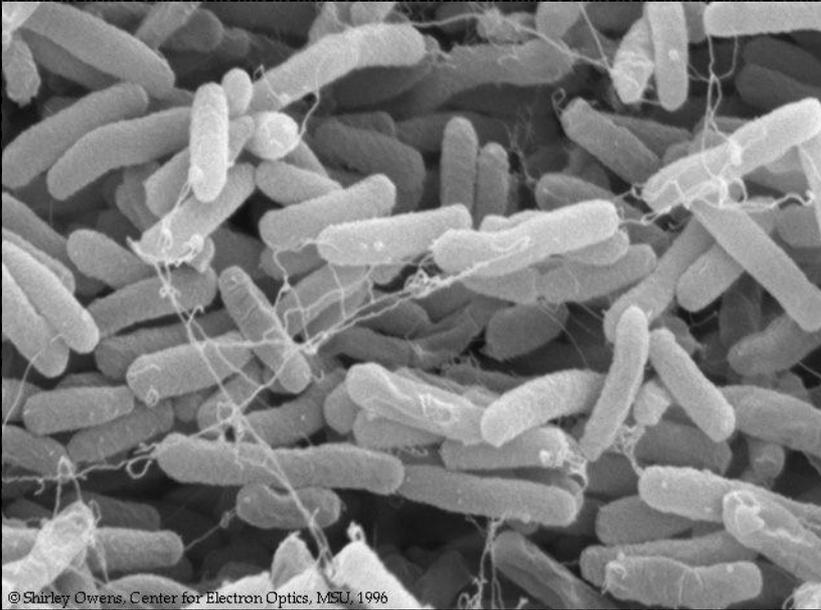
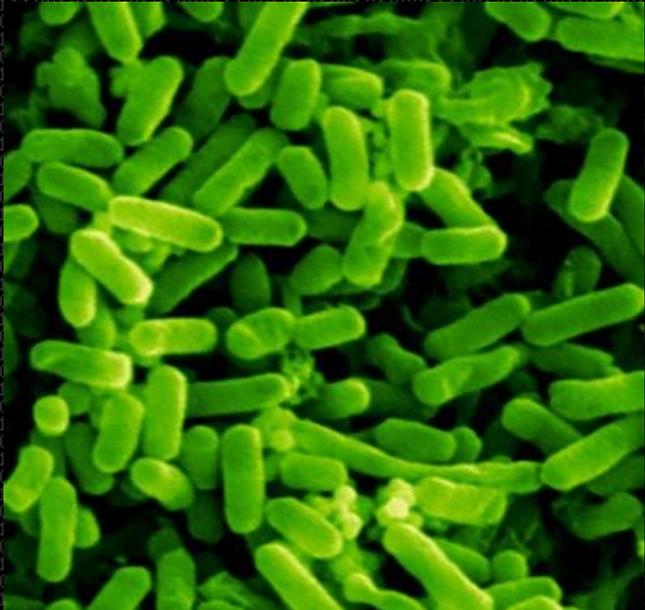


之前

之後



大肠埃希氏菌



大肠埃希氏菌能引起人类食物中毒-腹泻



Escherichia coli
ATCC 8739

1 minute

6.0×10^5

1.9×10^4

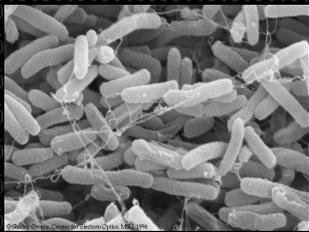
96.87%

24 hours

6.0×10^5

0

100.00%



埃希氏菌



之前

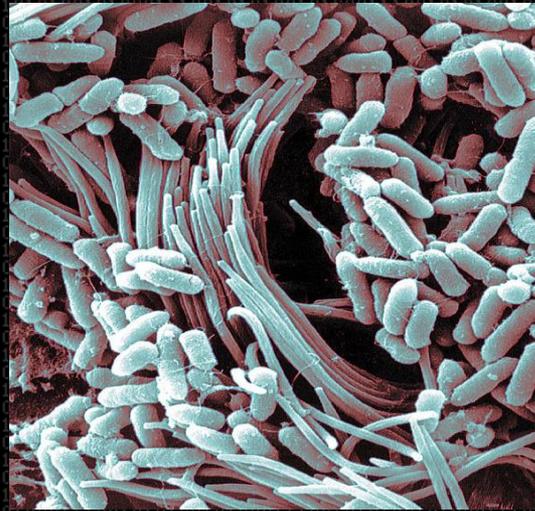
之後





假單胞菌

发生比较快，
组织损伤亦比较严重，
常见有结节性红斑。



有畏寒及发热等，可发生神经炎、关节炎、
淋巴结炎、鼻炎、急性睾丸炎。



SFS



SFS



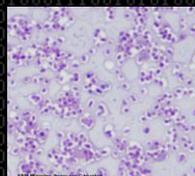
SFS

假單胞菌

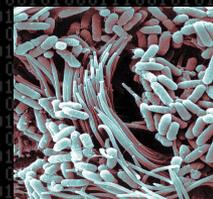




<i>Pseudomonas aeruginosa</i> ATCC 9027	1 minute	2.4×10^5	1.5×10^4	93.70%
	24 hours	2.4×10^5	0	100.00%



假單胞菌



之前

之後



我們頂峰相見

See You at the Top