



## Advantage

### UIV Product Competitive Advantage-Parameters can be customized

Items	Performance parameter
Appearance	Colorless to brown transparent solution (customizable)
Content (Ag)	Below 50000ppm (customizable)
PH	4±0.5, 7±0.5, 10±0.5 (customizable)
Particle Size	1-100nm (customizable)
Density	1.07 g/ml
Ag purity	99.99%
Carrier	Water, ethanol, or other organic solvents (customizable)

Kind	bactericidal property	Virus-killing property	Fungus-killing property	Irritation	Safety	Duration	Operation level	Disadvantages
Nano silver	Excellent	Excellent	Excellent	Low	High (Non-carcinogen, no irritation)	Long	Easy (Dilute it with water)	Slightly higher price
Chlorine dioxide	Excellent	Excellent	General	Middle	Middle (Non-carcinogen, acid-needed cremation)	Short	General (Mix with two doses of A&B)	Fast degradation and very short effect maintenance time
Sodium hypochlorite solution	Excellent	Excellent	General	Middle	Middle (Irritant to skin and respiratory tract)	Short	Easy (Dilute it with water)	Irritant and poor persistence
Sodium hydroxide solution	Excellent	Excellent	Excellent	High	Low (Irritant and corrosive to skin and eyes)	Middle	Difficult (Dilution shall be arranged sequentially in the safe area)	Corrosive and irritant
75% ethanol (alcohol)	Excellent	Poor	Poor	Middle	Middle (Sensitive to skin and flammable)	Short	Easy (Dilute it with water)	High price, invalid for most viruses and fungi
Hydrogen peroxide	General	General	General	High	Low (Irritant to eyes and skin)	Short	Difficult (Irritant, need to be diluted in a safe area)	High irritation

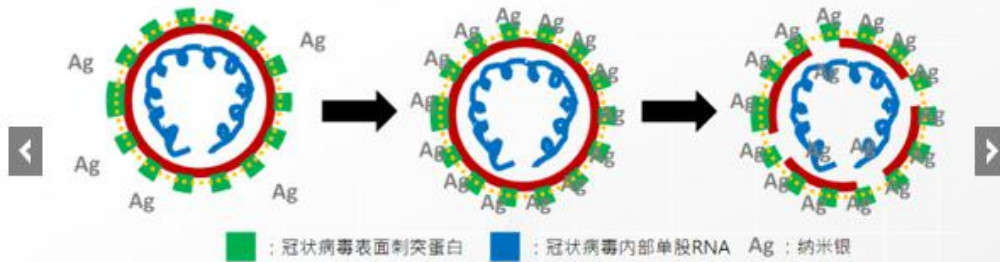
# Advantage

## UIV Nano silver antibacterial test certificate



# Advantage

## Nano silver antibacterial and anti-virus test certification



### Schematic of nano silver acting on coronavirus (SARS virus)

Silver itself is a metal material with very high activity, which has very high mechanical adsorption and reaction fixation effect on protein. Through various studies, it is found that Silver has very good killing effect on various viruses, at present, the mechanism of Silver's anti-coronavirus is not very clear. It is speculated that there are two possibilities:

1. Nano-silver will react with spike proteins on the surface of the virus, making the virus unable to infect other cells or directly kill the virus
2. Nano-silver enters the virus and combines with the RNA of the virus, causing RNA to denature and losing viral activity.

## Advantage Nano silver antibacterial and anti-virus test certification

无机抗菌剂与 SARS-COV-P11 分别作用不同的时间后，  
在 VERO E6 细胞培养内检测灭活的效果，以灭活效果%为指标

药物稀释浓度	灭活效果	1 小时	2 小时	3 小时	4 小时	6 小时
SARS-COV-P11	25%	750	187.5	93.8	46.8	46.8
	50%	1500	375	187.5	93.8	93.8
	100%		750	375	187.5	187.5

注：1. 表中药物稀释浓度的单位为  $\mu\text{g/ml}$ 。  
2. 表中数据为三次实验结果的平均值。

中国疾病预防控制中心病毒预防控制所



Test results of nano silver acting on SARS (SARS virus)

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奈米銀水溶液，具有抑制流感病毒 A 型感染細胞的能力，將奈米銀水溶液與病毒作用後的液體加入細胞中，奈米銀水溶液可抑制流感病毒 A 型，使病毒產生病毒斑的能力 (virus plaque forming) 下降，實驗組為加入奈米銀水溶液的組別，而空白組為沒有加入奈米銀水溶液的組別，相比實驗組與空白組結果，奈米銀水溶液對流感病毒 A 型 H1N1 抑制率為  $93.1 \pm 0.7\%$ ，對流感病毒 A 型 H3N2 抑制率為  $49.9 \pm 8.2\%$ 。

Results of influenza a test at 10ppm nano silver

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新興病毒感染研究中心

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具有抑制腸病毒 71 型、腸病毒 68 型、克沙奇病毒 A16 型感染細胞的能力。①先將奈米銀水溶液與病毒作用後再加入細胞中，來得知奈米銀水溶液具有直接殺滅病毒的能力，抑制率皆為 100%。②先將奈米銀水溶液加入細胞中再加入病毒，來得知奈米銀水溶液具有阻止病毒進入細胞能力，抑制率皆為 100%。③先將奈米銀水溶液與病毒作用後，再加入已含奈米銀水溶液的細胞中，來得知奈米銀水溶液具有直接殺滅病毒的能力，以及具有阻止病毒進入細胞的能力，同時作用於這兩種路徑的加乘作用，抑制率皆為 100%。

Results of enterovirus and keshaqi test at 10ppm nano silver

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