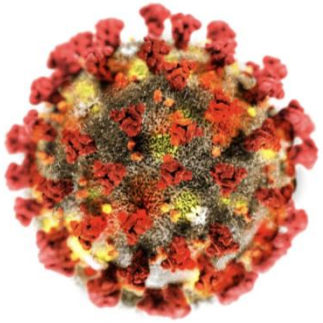


NWK A-FV(Anti-Fabric Virus)

COVID-19 Sterilization (surface 99.0 % within 2hr, float 77.6% within for 4weeks) and
Antimicrobial (99.9%) & **Stench** (99.9%) disinfectant



NAE WOI KOREA Co., Ltd.

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Website: www.naewoikorea.com

1. COVID-19 『Sterilizing Agent』

1) Result of Testing Surface Contact Sterilization

(COVID-19 Sterilization and Antimicrobial & Stench Remover / NWK A-FV)

■ Technical Summary

- As a complex compound made up of Compound Natural Oil,
 - 1) **COVID-19 Sterilization: Surface 99.0% within 2hr, Floating 77.6% for 4weeks**
 - 2) **Kills Germs** (Colon Bacillus, Staphylococcus Aureus, Pneumococcus): **99.9% (24hr)**,
 - 3) **Removes Stench** (Ammonia, Acetate): **99.9% (2hr)**,
 - 4) Result of **Testing Human Skin Irritation: Non-irritating (24hr)**

Test Report



Report No. 2021KRIBS1605.0001R01

page 1 of 4

Issued Date : 2022. 03. 08.
Client : NAEWOIKOREA Co., LTD.
Sample No. : 1
Sample Description : NWK A-FV 2
Analysis : Evaluation of float-virus reduction for NWK A-FV 2

■ COVID-19 Sterilization Test Result

- The result of the test done by the Korea Research Institute of Bio Medical Science, a Professional Virus-Testing Institute, confirmed that Feline Coronavirus perished by 99.0% within 2 hours. (Oct. 15, 2021)
Floating Feline Coronavirus 77.6% for 4weeks(Mar.08.2022)

Result

1. Virus : Feline coronavirus (FCoV)
2. Host cell : CRFK cell
3. chamber size : 80 x 50 x 50 cm³
3. Test condition : 4 weeks of Sample processing period in chamber, 2-hour contact time, 25±1 °C
4. Result

Sample	Result			
	Control (log TCID ₅₀)	2-hour contact time(log TCID ₅₀)	Log reduction	Persent reduction (%)
NWK A-FV 2	4.14	3.49	0.65	77.61

* For details please see attached pages.

confirmation	Tested by	Hye-sun Yun	Approved by	Moop-Gu Kim
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Note.

1. The test results on this report are only limited to the samples and sample names provided by the customer and KRIBS do not guarantee the quality of all products of the customer.
2. This test report shall not be used for public relation, advertisement, lawsuit and any other purposes outside the scope of its defined usage.



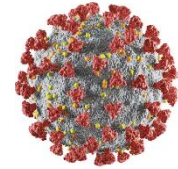
2) Features of the Product

Protecting People's Lives

○ Protecting **People's Lives** from Various Germs including **COVID-19**

- The sterilizing substance penetrates into germs and viruses and destroys and kills their protein structures.

Corona Virus



Technology

○ Lasts for over 3 Months thanks to the Purely Natural Sterilizing Substances Developed in Korea Turning into Egg Shells and Killing even Floating Viruses

Safety

○ Natural Substances



미국 연방 식품의약품 FDA (FOOD AND DRUG ADMINISTRATION)

미국 보건복지부 (U.S DEPARTMENT OF HEALTH AND HUMAN SERVICES) 산하 기관으로서 미국에서 가장 역사 깊고 신뢰 할 수 있는 소비자 보호기관의 하나로 한국의 식품의약품에 해당하는 정부기관입니다.

Registration confirmation: **10080973**

Staphylococcus Aureus



Economic Feasibility

○ Once Sprayed: 3-Month-Long Sterilization, Antimicrobial and Stench Removing

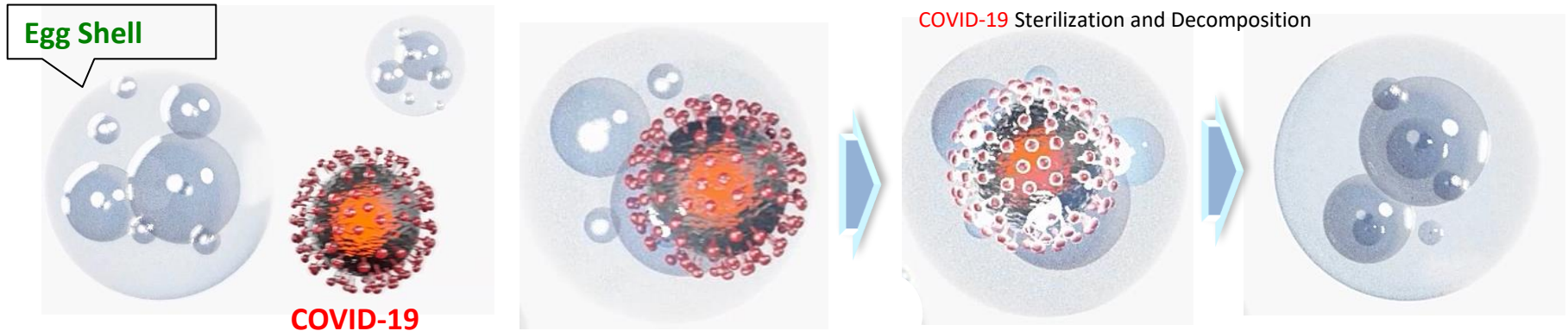
Eco-Friendliness

- Harmless to the Human Body
- Result of Testing Human Skin Irritation: Non-Irritating

3) COVID-19 Sterilization Process

■ Smog Spray Coating

※ Coating Thickness: 30~40 μm



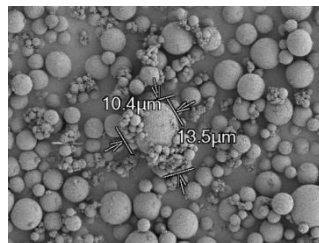
○ Egg Shell?

- There are three types of egg shells in μm sizes, which responds to heat in the atmosphere. According to the Le Chatelier enthalpy principle, oil in such egg shells continuously comes out to kill various microorganisms floating in the air.

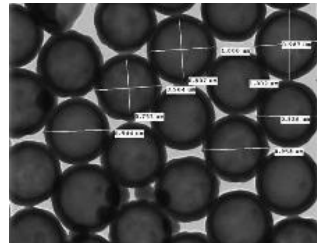
※It would be possible to extend the sterilization period from 1 year to 3~4 years just by adjusting the size and thickness of the egg shells.



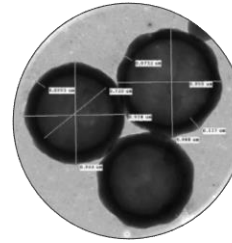
Spray



Egg Shell Attachment



Picture Showing Nano Particle Sterilizing Substances (A-FV) Penetrated into Egg Shells (50,000 Magnification)



Once Sprayed
: Sterilizing Effect
Lasts 3 Months

4) COVID-19 Sterilizing Substance Certified by and Registered with the FDA

■ FDA(Food and Drug Administration) Registration

- The substance, as a medical device antimicrobial coating agent, has been certified by and registered (Registration confirmation: 10080973) with the FDA, which is right under the Department of Health and Human Services in the US, and one of the most historic and reliable consumer protection organizations, playing the role as that of Korea's KFDA.



○ Details of the Registration

- . DEPARTMENT OF HEALTH AND HUMAN SERVICES
- . Food and Drug Administration
- . Center for Devices and Radiological Health
- . 10903 New Hampshire Ave., WO66 Room 1423 Silver Spring, Maryland 20993-0002

2. Bacteria 『Antimicrobial』

1) Bacteria: 99.9%

■ Causes and Damages

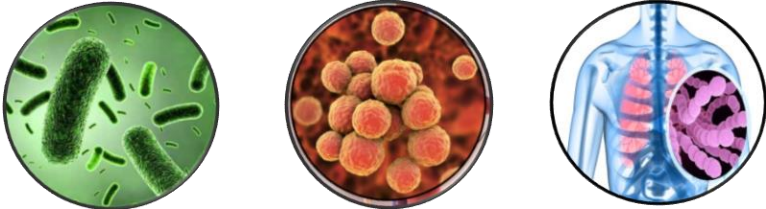
- Patients with deteriorated immunity may develop diseases depending on the types of **colon bacill**.
- **Staphylococcus aureus** causes food poisoning, resulting in high fever, stomachache, vomiting, diarrhea, scarlet fever, purulent arthritis, osteomyelitis, ear infection, postoperative wound infection, endocarditis, and others.
- When infected with **pneumococcus**, symptoms like a cold appear for 2~3 days and a valley fever could last for 1~2 weeks with sputum and sore throat and others. In addition to pneumonia, the germ may also cause cerebrospinal meningitis, meningitis, encephalitis, neuromuscular inflammation, digestive symptoms, acute hepatitis and other liver disorders.

■ Result of Testing Colon Bacill, Staphylococcus Aureus and Pneumococcus

- The result (AATCC TM 100:2019) of antimicrobial tests conducted by KOTITI has confirmed a 99.9% sterilizing effect.

※ AATCC TM 100:2019 is used to evaluate the efficiency of a sterilizing agent on fungus and decomposition arising out of fabric materials.

(Test: Oct. 22, 2021)

Test Items	Unit	Test Results	Note
• Colon bacill (After 24h)	%	99.9	
• Staphylococcus aureus (After 24h)	%	99.9	
• Pneumococcus (After 24h) (Klebsiella pneumoniae)	%	99.9	

■ Sterilization Result: 99.9%

(A) Contrast Bacteria
(Staphylococcus Aureus)



(A) Staphylococcus Aureus



(A) Contrast Bacteria
(Klebsiella Pneumoniae)



(A) Klebsiella Pneumoniae



(A) Contrast Bacteria
(Escherichia Coli)



(A) Escherichia Coli



KOTTI

Global Business Partner

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Antibacterial Test (AATCC TM 100:2019)

Test Conducted	Test Results			
	(A)	Staphylococcus aureus	Klebsiella pneumoniae	Escherichia coli
Original				
A	< 100	< 100	< 100	< 100
C	2.0×10^7	2.3×10^8	1.8×10^8	
Reduction(%)	99.9	99.9	99.9	
B	2.9×10^5	2.2×10^5	1.9×10^3	
Bacteriostatic Reduction Value(%)	99.9	99.9	99.9	

Note) * Bacteriostatic reduction rate(%) : (C-A) X 100/C, Bactericidal reduction rate(%) : (B-A) X 100/B
 A: The number of bacteria recovered from the inoculated treated test specimen swatches in the jar incubated over the desired contact period B: The number of bacteria recovered from the inoculated treated test specimen swatches in the jar immediately after inoculation; (at "0" contact time)
 C: The number of bacteria recovered from the inoculated untreated test specimen swatches in the jar incubated over the desired contact period

Test Organism	Staphylococcus aureus(ATCC 0538) Klebsiella pneumoniae(ATCC 4352) Escherichia coli(ATCC 25922)
Viability control(Log)	1.9 / 3.1 / 3.0
Sample size	4.8 cm diameter
Neutralizer	Dey Engley broth
Dilution medium	0.85% Saline solution
Media used	Nutrient agar
The number of swatches used per jar	2
Reduction (%)	$((C - A) \times 100) / C$
A	The number of bacteria recovered from the inoculated treated test specimen swatches in the jar incubated over the desired contact period.
C	The number of bacteria recovered from the inoculated treated test specimen swatches in the jar immediately after inoculation; at "0" contact time.
Test specimens sterilization	not performed (customer request)

QPF-16-06(rev.01)

KOTTI Testing & Research Institute

3. Stench Removing 『Deodorant』

1) Result of Removing Stench: 99.9% (2hr)

Japan Textile Evaluation Technology Council (JETEC)



(Test: KOTITI/Oct. 22, 2021)

1) Ammonia(NH₃)

Unit	Initial Concentration	After 2 Hours	Reduction Ratio(%)	
Mg/kg	100	0	99.9	

2) Acetic Acid

Unit	Initial Concentration	After 2 Hours	Reduction Ratio(%)	
Mg/kg	30	0	99.9	

Recent Consumer Trend

- While existing textile products consider durability, dyeing and texture important, consumers are now getting into products with **antimicrobial and deodorizing** functions as they are interested in health and personal hygiene.
- This product is able to **sterilize COVID-19 and has antimicrobial and deodorizing (removing ammonia) functions** and lasts more than 3 months once sprayed.

92211002135086(A1) PAGE 2 OF 6

Deodorization Efficiency, mg/kg (JETEC Method(JAPAN))

Test Conducted	Test Results	
	0 Hour	After 2 Hour(s)
(A)		
Submitted State(Concentration of ammonia gas(NH ₃), mg/kg)		
Blank	100.0	99.7
Sample	100.0	0
Reduction(%)	-	99.9
Submitted State(Concentration of acetic acid gas(CH ₃ COOH), mg/kg)		
Blank	30.0	29.3
Sample	30.0	0
Reduction(%)	-	99.9

Test method Put specimen 10 cm x 10 cm into 5 L of tetra bag and inject 3 L of test gas. Then, measure the gas concentration using detector tube after 2 Hour(s).

Detector tube NH₃ - 3La (GASTEC)

KOTITI Testing & Research Institute

QPF-16-06(rev.01)

KOTITI Digital Business Partner

4. Skin Irritation 『Non-Irritating』

1) Result of Testing Skin Irritation: Non-Irritating

■ Details of Testing Human Skin Primary Irritation

(Test: July 16, 2021)

Tested By	P&K Skin Research Center	Research Management No.	PNK-21717-17R
Test Period	June 23, 2021 ~ July 16, 2021		
Criteria for Selecting Test Subjects	<ol style="list-style-type: none"> 1. Adults aged between 20 and 55 2. Those without acute and chronic diseases including skin problems 3. Those that voluntarily signed the test consent after hearing the purpose and content of the test 4. Those that can be monitored during the test period 		
Criteria for Excluding from the Selection	<ol style="list-style-type: none"> 1. In case that he/she does not want or sign the test consent 2. In case that he/she has wounds, tattoo or scars including red spots, crusty skin patches, scratches and others on the test area 3. In case that he/she has infectious skin diseases 4. In case that he/she has a medical or drug treatment history related with skin reaction 5. In case that he/she gets severely irritated by or allergic to cosmetics, drugs or ordinary sunlight 6. In case that he/she is participating in another human body test 7. If pregnant or breastfeeding 8. In case that senior researchers or testers believe he/she is not able to take the test due to reasons other than those cases indicated above 		
Test Result	<ol style="list-style-type: none"> 1. All 32 test subjects that have completed the test were females aged around 39.094. As for the skin conditions of the test subjects, 13 have dry skins, 6 have neutral dry skins, 11 have neutral skins, 1 has a neutral oily skin and 1 has an oily skin. Those selected subjects did not have any specific skin symptoms, diseases and medication histories that could affect the test. 2) Result Test Product Name: NWK A-FV/ Skin Irritation Degree: Non-Irritating 3) The product is considered non-irritating after researchers making bare-eye evaluations of skin reactions 1 hour and 24 hours after conducting a patch test of the product for 24 hours. 		

5. Precautions before Use

- . Before spraying the product, shake it enough until egg shells (due to the size difference, they may be separated while being kept) turn milky.
- . Do not spray the product directly to the face even as it is harmless to people or pets.
- . When the substance gets into your eyes, wash them with running water and see a doctor, if necessary.
- . Do not spray more than 30~40 μ m at one spot as it may cause stains or stickiness.
(Spray Product: The amount of 30~40 μ m is applied once sprayed.)
- . When applying the product onto materials (leather or fur items and mural paintings) vulnerable to stains, conduct a pre-test before using it.
- . Wipe it out immediately in case the product has been sprayed on improper materials.
- . Do not use the product for other purposes and do not mix it with water or other chemicals.
- . You may reuse the empty container as it is economical to purchase and use a separate refill product.
- . The expiration period is 1 year after it was manufactured and it is recommended to use the product within 12 months once opened.
- . Avoid direct sunlight and high temperatures after using the product and keep it out of reach of children

- . It is made of substances extracted out of purely natural ingredients from Korea and is harmless to the human body and the environment as registered in the FDA (as a medical device sterilization coating agent).
- . The relevant substances are registered in the National Institute of Environmental Research and KFDA and the product has been confirmed non-irritating according to the result of skin safety test.
- . The product is harmless to animals.




6. How to Use

■ Spray Type

- Portable Spray: for beddings, textiles, clothes, carpets, couches, sports items and others
 - Pull the spray gun 20~30cm away from the target, and the amount of 30~40 μm is applied when sprayed once.



Product Name		COVID-19 Sterilization, Antimicrobial and Stench Remover	Note	
Type		Spray Type		
Capacity		300ml		Refill: 1ℓ, 4ℓ, 10ℓ, 20ℓ
Use	Sterilization	COVID-19(99.0%/2hr)		
	Antimicrobial	Colon Bacillus, Staphylococcus Aureus, Pneumococcus(99.9%)		
	Stench Removing	Ammonia, Acetic Acid(99.9%/2hr)		
Main Substances		A complex compound made up of Silicate + Modified, Compound Natural		
Expiration Period		1 Year after being manufactured		
Call Center		+82-31-734-0350		

■ Large Size (by using equipment)



- Large Size (2~5 meters of spray distance): public, education, medical and social welfare facilities, companies (offices), accommodations, houses, and religious and commercial facilities
 - Spray to ceilings and walls at a distance of 2~5 meters by using an ultrafine particle smog sprayer (see the photos).

7. Application



- Hospitals (Emergency Rooms, Hallways, Wards, Medical Garments, Infected Areas and Others)
- Companies (Meeting Rooms, Restaurants, Dormitories, Training Centers and Multi-Purposed Facilities)
- Schools and Private Institutions (Lecture Rooms, Cafeterias and Gyms)
- Hotels, Resort, Accommodations
- Travel Agencies (in Vehicles)
- Broadcasters (Open Halls and Others)
- Religious Facilities (Churches)
- Highway Lounges and Restaurants
- Call Centers
- Gyms
- Military Facilities (Barracks, Restaurants, Warships, Bunkers and Others)
- Social Welfare Facilities and Nursing Facilities (Nursing Home and Senior Citizen Centers)
- Subway Platforms and Inside Cars
- Houses (Bed Rooms, Living Rooms, Bathrooms, Pet Cages)
- Livestock Farm Sterilization and Stench Removing (Chickens, Pigs, Cows, and Others)

