



V SHIELD™

**1 METER VIRUS PROTECTION
FOR 30 DAYS**



What is V SHIELD Sterilization Multipurpose Clip?	3
What makes V SHIELD unique?	3
What is Chlorine Dioxide?	4
How does Chlorine Dioxide work?	4
What makes V Shield Chlorine Dioxide unique?	5
Is V SHIELD Sterilization Multipurpose Clip safe?	7
What are the key benefits?	8
Does V SHIELD contain bleach?	9
How V SHIELD used?	9
Does V SHIELD have any toxicity?	9
What's the safety level V SHIELD has?	9
Is V SHIELD classified sterile agent?	9
What microorganism is V SHIELD effective against?	9
What is the shelf life of V SHIELD?	10
Is there any counter indication for V SHIELD?	10
Does V SHIELD sensitive to heat or cold?	10
How long does it take for V Shield to be effective?	10
Does V Shield used in wound cure? What kind of wound?	10
Does V Shield have any disposal requirement?	10
Does V Shield damaga tissues?	10
Does V Shield induce mutagenicity?	10
Are there any side effects or known allergy or sensitivity to V SHIELD?	10
Does V SHIELD damage DNA in fibroblasts or wounds?	11
How is V SHIELD different from Dakins (Antiseptic, Sodium Hypochlorite)?	11
How is V SHIELD different from Hibic Lens (Chlorhexidine products)?	11
How is V SHIELD different from silver solution?	11
Any evidence about distance effectiveness of viral blocking?	11
Does V SHIELD affect virus, like Corona Virus?	12
Any studies on V SHIELD Multipurpose Clip against viruses?	12

FREQUENTLY ASKED QUESTIONS

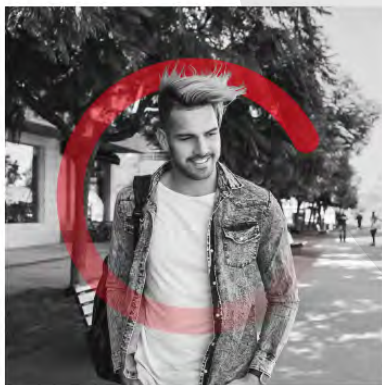
What is V SHIELD Sterilization Multipurpose Clip?

V SHIELD is a multipurpose sterilization clip that emits a slow-release vapor that is 99.9% effective at killing viruses (including SARS-COV-2), germs, bacteria & fungus in a 0.5-meter radius (1 m range) for 30 days after opening.

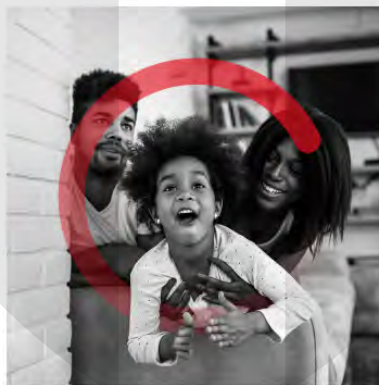
Easy-to-use sterilization wearable that can conveniently attached to clothes, bags, and many other utensils. It comes in black and white. The clip can be applied, but not limited to Cloth, Bag, Cap, Mask, Offices, Car, and many other items. Clip it where you want to use and need protection.



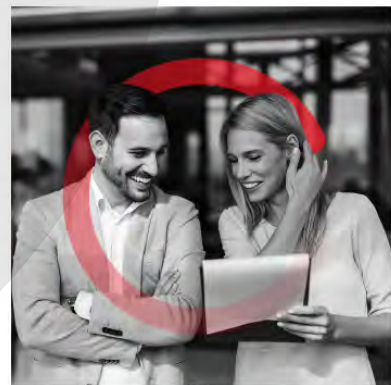
Protect yourself



Shield your family



Safe return to work



V SHIELD is a product that produces a patent slow-release chlorine dioxide in crystal forms. It reduces viruses, germs, bacteria, mold, and bad odor.

What makes V SHIELD unique?

V SHIELD is based on a patent slow-release chlorine dioxide. V Shield uniquely releases a safe, powerful, sterilizing and deodorizing vapor over 30 days.

Chlorine Dioxide (ClO_2) is internationally approved including the EU, FDA, EPA, Korea Ministry of Health, under the recognized Chlorine Dioxide regulations.

V SHIELD Chlorine Dioxide (ClO_2) developed the world's first material conversion method to improve chlorine dioxide's durability. The first molecular transformation technique that can achieve a sustained release of chlorine dioxide consistently for a long time.

What is Chlorine Dioxide?

Chlorine Dioxide (ClO_2) is a yellow-green gas that was discovered in 1814. Since the early 1900s, people have been using it as a disinfectant.

Chlorine Dioxide is an oxidant. This means that Chlorine Dioxide removes electrons from another compound during a chemical reaction. This activity makes it toxic to many bacteria and fungi.

Chlorine Dioxide is considered safe for humans at concentrations 0,1 part of a million (ppm) in gas and 0,1 ppm for drinking water disinfectant.

How does Chlorine Dioxide work?

Chlorine Dioxide acts as an oxidizing agent (gains electrons during chemical reactions) and interacts with cell components. By taking electrons from microbes, the microbe's molecular bonds weaken and the cell breaks apart. This process alters the proteins involved in their structure and decreases enzyme function, thus resulting in the death of the microbe. This attack on many proteins simultaneously prevents the microorganisms from mutating and developing resistance. Uses of Chlorine Dioxide:

1. Antimicrobial Activity

Chlorine Dioxide is frequently used to sterilize water and make it safe to drink. The maximum safe limit for chlorine dioxide in drinking water, according to the EPA, is 0.8 mg/L. Chlorine Dioxide gas can go through bacterial cell membranes and cause cell death in the pH range of 3-9. In lab tests, chlorine dioxide was more effective at inactivating fungal spores than chlorine. It inactivated fungal spores by damaging the cell wall and cell membrane, thus causing the leakage of cell substances and, eventually fungal death. In another study, a chlorine dioxide solution reduced 98.2% of bacteria and fungi in a lab test (E. coli, Staphylococcus, Pseudomonas, listeria, salmonella, Candida albicans, etc.).

2. A Powerful Disinfectant

The antimicrobial properties of chlorine dioxide are used to disinfect food, surgical tools, and more. Low concentrations of chlorine dioxide are effective in reducing E. coli present in water.

Various chlorine dioxide products can help disinfect water and produce safe drinking water. In a 30-month prospective study, chlorine dioxide-treated water in a hospital decreased Legionella bacteria counts. Additionally, there were no patients that acquired Legionnaires disease during the study.

The bacteria on vegetable seed sprouts can cause stomach problems and disease outbreaks. Chlorine Dioxide treatment and dry heating eliminated E. coli on radish seeds without damaging the seeds. Thus, it can help with food safety.

Chlorine Dioxide treated water significantly reduced Escherichia coli (E. coli) bacteria counts on baby spinach. However, non-culturable cells (bacteria that do not grow or divide) were still present. The

treatment did not affect the quality of the baby spinach, but it reduced its photosynthetic abilities. In a pilot study, chlorine dioxide gas disinfected gastrointestinal endoscopes, an instrument used to look at the inside lining of the digestive tract. The gas completely inactivated bacterial cells and disinfected all endoscopes.

3. Improving Air Quality

Chlorine Dioxide gas efficiently disinfected and improved air quality indoors after single (0.28L solution, 250 mg/L), double, and triple doses. All three doses reduced indoor bacteria and fungi concentrations, but the double and triple doses had significantly better antimicrobial effects.

In another study, a chlorine dioxide-based agent was more effective than hydrogen peroxide at killing bacteria that had enhanced resistance to chemical and radiation disinfection.

Chlorine Dioxide can help sterilize peroxide- and UV-resistant spores in hospital environments. In another study, chlorine dioxide decontaminated known pathogens that can cause infections in a hospital room. Although each hospital room had lower bacteria counts, 2 cleaning cycles failed to inactivate all harmful organisms completely.

What makes V SHIELD Chlorine Dioxide unique?

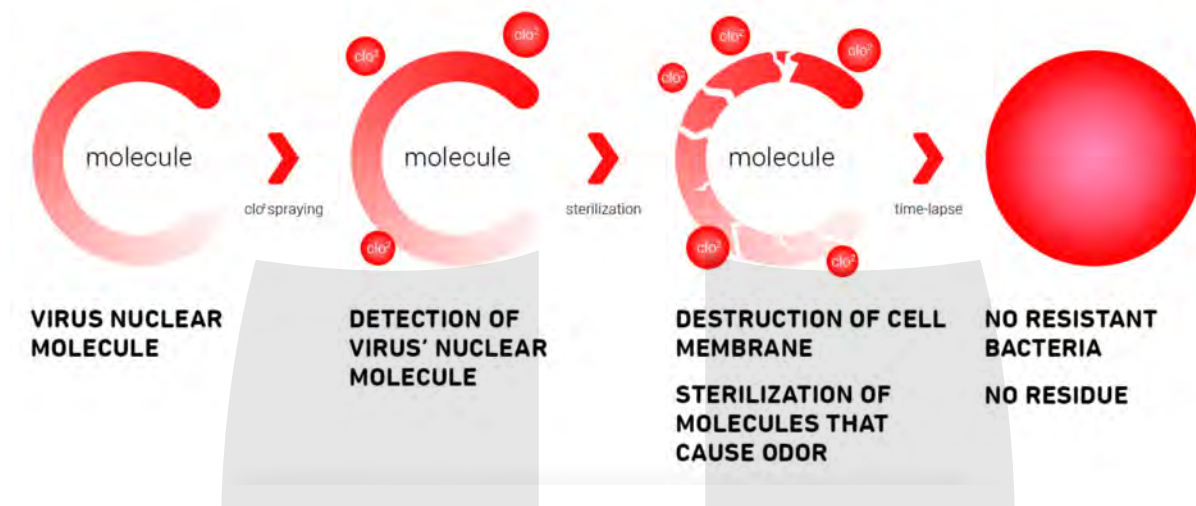
V SHIELD Chlorine Dioxide (ClO_2) developed the world's first material conversion method to improve chlorine dioxide's durability. The first molecular transformation technique that can achieve a sustained release of chlorine dioxide consistently for a long time. Compared with existing chlorine dioxide V SHIELD Chlorine Dioxide has a key differentiation:

Chlorine Dioxide Comparative Analysis

Existing Chlorine Dioxide (ClO_2) Product	V SHIELD Chlorine Dioxide (ECOBIO- ClO_2)	
Poor safety	Safety	Maximum safety A-1 Grade
Harmful to the human body	Toxicity	Non-toxic and harmless to human body
Poor	Persistency	Molecular transformation method improves sustainability
Quickly evaporation, causing short usage time	PAO	Maintain from at least 1 month, up to 3-6 months
Strong sterilization effect	Effect	1.Strong sterilization effect 2.Strong deodorizing effect 3.Powerful Area Sterilization Effect 4.Remove the cause of the virus

It is a pure chlorine dioxide manufacturing technique that does not include any additional additives in the process of making chlorine dioxide. It continuously improves the sustainability of the efficacy and effectiveness of chlorine dioxide. V SHIELD ClO_2 gas is emitted around the point of use to remove various harmful bacteria in the space.

V SHIELD ClO_2 is a mechanism that removes the causative agent by destroying the cell membrane of bacteria with strong oxidizing power, blocking the reproductive or resistant bacteria. In order to effectively block the formation of metabolites and by-products of bacteria that cause odor, the cause substances must be removed. In the case of mold, spores float in the air and multiply.



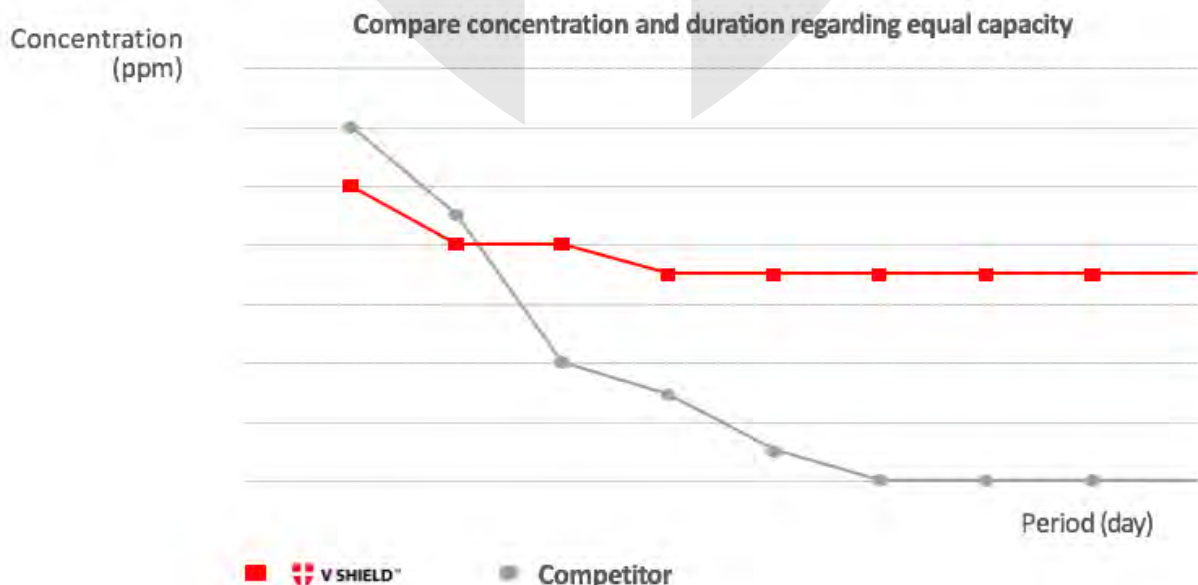
Chlorine Dioxide is a food-safe product that provides 99.9% effective sterilization and disinfectant for viruses and bacteria including COV-19, making it up to 5 times more effective than similar products.

The V SHIELD Chlorine Dioxide (releases a stable concentration of gases for about two months with 0,7 parts per million concentrations).

V SHIELD Chlorine Dioxide is the world's first develop material conversion method to improve chlorine dioxide's durability.

Gas concentration maintenance experiment

Japanese third-party products did not spread the gas after about 15 days, and the emission was not constant even for 15 days.



Our product maintain at 0.07ppm for about 2 months



Is V SHIELD Sterilization Multipurpose Clip safe?

Both V SHIELD Sterilization Multipurpose Clip is FDA approved as disinfected and medical device and V SHIELD Chlorine Dioxide is an internationally approved, safe, and effective substance recognized by the World Health Organization as the highest safety grade (A-1), EU, FDA, EPA, and Korean Health Ministry under the recognized Chlorine dioxide regulations.

Chlorine Dioxide is safe and powerful as it doesn't contain chlorine-based bleaching agents. V SHIELD ClO_2 's active ingredient is chlorine dioxide / ClO_2 . The biochemical mechanisms of Chlorine Dioxide as an anti-microbial that inactivates 99.9 of viruses and bacteria by eliminating the cell membrane with an effect noticeable after only 0.5 seconds of exposure.



A1 grade equivalent to sugar and salt among food additives



Food additives, medical use, medical device disinfection use permission



Recommended as a disinfectant drinking water

V SHIELD's ClO_2 packs a non-toxic punch of 0.07 parts per million, killing viruses and bacteria well below the approved safe limits for humans of 0,1 ppm (parts per million), giving you peace of mind for all occasions and environments.



0%

1%

HAZARDOUS

25%

Not considered hazardous and approved as safe limits for humans is 0,1 ppm.

According to the FDA, WHO, and the Environmental Protection Agency in the USA, chlorine dioxide gas is safe with 0,1 part per million (0,28 mg/m³).

What are the key benefits?

A safe and powerful 99.9% sterilization, disinfectant, and deodorizing vapor that protects against bacteria, mold, odor, and viruses.

- **Powerful Virus Protection**

V SHIELD is a multipurpose sterilization clip that emits a slow-release vapor that is 99.9% effective at killing viruses, germs, bacteria, mold, and fungus in a radius of 0.5 meters (1 m range) within 5 seconds of exposure, for 30 days after opening.

- **Effective Sterilization and Disinfection**

V SHIELD damages the DNA of viruses, bacteria, mold, and unwanted odors to eliminate the core of the virus. V SHIELD sterilization products eliminate cell membranes of 660 types of virus and bacteria including SARS-COV-2, making it up to 5 times more effective than similar products.

- **99.9% de-odorization**

Unlike scents that temporarily mask odors, V SHIELD oxidizes and decomposes bad odors with powerful oxidizing power. V SHIELD is eco-friendly as it decomposes naturally in light and air after eliminating odors.

- **Internationally Safe Product**

Chlorine Dioxide is an internationally approved safe and effective substance recognized by the World Health Organization as the highest safety grade (A-1), EU, FDA, EPA, Korean Health Ministry under the recognized Chlorine Dioxide regulations.

- **Personal Protective Equipment (PPE)**

V SHIELD supports the WHO recommendations on the PPE guideline; "Any person who is in close contact (within 1 m) with someone who has respiratory symptoms (coughing, sneezing) is at risk of being exposed to potentially infective respiratory droplets. Droplets may also land on surfaces where the virus could remain viable; thus, the immediate environment of an infected individual can serve as a source of transmission (contact transmission).

Wearing a medical mask is one of the prevention measures that can limit the spread of certain respiratory viral diseases, including COVID-19. However, the use of a mask alone is insufficient to provide an adequate level of protection, and other measures should also be adopted. Whether or not masks are used, maximum compliance with hand hygiene and other IPC measures is critical to prevent human-to-human transmission of COVID-19. WHO has developed guidance on IPC strategies for home care and health care".

Does V Shield contain bleach?

V SHIELD doesn't contain a chlorine-based bleaching agents. It's an active agent of pure crystalized Chlorine Dioxide that is safe and regulated for human usage.

How V SHIELD used?

First, remove the protective film carefully from the adhesive side of the clip. Attach the wearable clip to what you want to sterilize and protect. The Clip emits a vapor cloud of disinfected up to a 1 meter for 30 days.

Does V SHIELD have any toxicity?

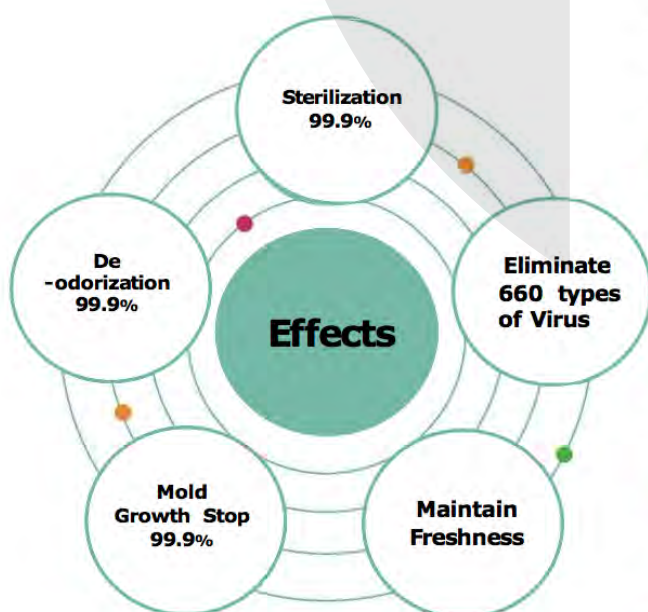
V SHIELD doesn't contain a chlorine-based bleaching agents. It's an active agent of pure crystalized Chlorine Dioxide that is safe and regulated for human usage.

What's the safety level V SHIELD has?

V SHIELD's technology packs a non-toxic chlorine dioxide vapors of 0.07 parts per million, fighting viruses and bacteria. According to EPA, FDA and WHO chlorine dioxide gas safe limits for humans are 0,1 parts per million.

Eliminate Virus harmful bacteria, mold, odor in areas

Release Chlorine Dioxide gas from usage point in the area, Eliminate various bacteria, virus. (Areas use and PAO different depending on Product)



Deodorization / Sterilization 99.9%.
Maintain ingredients at least 1 month and maximum of 3~6 months!

Sterilization

With Usage of liquid (50ppm), Perfect sterilization occur within 10 seconds.

Deodorization

Perfect Sterilization for ammonia, hydrogen sulfide, Methylmercaptan that is harmful to human body. (It won't eliminate natural flavors.)

Eliminate 660 types of Bacteria

Since it destroys molecular structure, almost every virus is eliminated.

Mold Growth Stop

Not only stop growth of Mold but also eliminate mold that already occurs.

Maintain Freshness

Keep Freshness reducing ethylene gas and suppressing polyphenol oxidase.

Is V SHIELD classified sterile agent?

Yes, V SHIELD Sterilization Multipurpose Clip is FDA approved and regulated as a disinfectant and medical device under the highest classification.

What microorganism is V SHIELD effective against?

They are effective against 660 bacteria, viruses, mold, etc.

What is the shelf life of V SHIELD?

The shelf life of V SHIELD Sterilization Multipurpose Clip is 30 days after the removal of the protective film. How to store V SHIELD? Avoid direct sunlight and store it in a cool area. The shelf life of the Multipurpose Clip is one year.

Is there any counter indication for V SHIELD?

Avoid using in enclosed space.

Does V SHIELD sensitive to heat or cold?

V SHIELD Sterilization Multipurpose Clip's chloride dioxide crystals were tested at 80% humidity, and it is sensitive to freezing temperature.

How long does it take for V SHIELD to be effective?

Once Multipurpose Clip's seal is opened, the chlorine dioxide is effective for 30 days.

Does V SHIELD used in wound cure? What kind of wound?

Since V SHIELD Sterilization Multipurpose Clip is not a Pharmaceuticals or Medical Products, they cannot be used in wound cure.

Does V SHIELD have any disposal requirement?

The content of V SHIELD will be disposed of as non-inflammable.

Does V SHIELD damage tissues?

It doesn't damage tissues.

Does V SHIELD induce mutagenicity?

They do not induce mutagenicity.

Are there any side effects or known allergy or sensitivity to V SHIELD?

There are no side effects reported.

Does V SHIELD damage DNA in fibroblasts or wounds?

No, it does not damage DNA in fibroblasts or wounds.

How is V SHIELD different from Dakins (Antiseptic, Sodium Hypochlorite)?

Sterilizing the power of chlorine dioxide is more effective than sodium hypochlorite. Chlorine Dioxide doesn't create toxicities, including trihalomethane.

How is V SHIELD different from Hibic Lens (Chlorhexidine products)?

Sterilizing power and bactericidal rate of chlorine dioxide is more effective than chlorhexidine products.

How is V SHIELD different from silver solution?

The antibacterial activity of silver solution is by Ag ion. Chlorine dioxide vapors work by oxidation action.

Any evidence about distance effectiveness of viral blocking?

We are currently examining against killed bacteria and viruses.

[Just like the Wuhan pneumonia]
Bacteria and Virus that threatens our health are everywhere.

How nice would it be if you could sterilize anytime, anywhere?
'V SHIELD Sterilization Card can do that!'

99.9%

Antibacterial / Sanitization / virus Removal



Solution

There are countless bacteria living around us.

KCL

QR Code

TEST REPORT

1. No. : 2719-190009
 2. Date : 2019.11.18
 3. Site of Test : 2019.10.18 ~ 2019.11.18
 4. Name of Report : Quality Control
 5. Test Name(s) : Speed Flow Rate (SFR)
 6. Test Method :
 (1) Test is a microbiological method

Test Items		Test method	Test Results			Testing Environment
			Early Conc. (CFU/mL)	After 24 h Conc. (CFU/mL)	Reduction rate of bacteria(%)	
Antibacterial test	BLANK	Client's requirement method	1.0×10^4	1.0×10^4	-	[37.0 ± 0.2]°C
<i>Atyphi pneumoniae</i>	Speed Pump Pump-It (Pump-It)		1.0×10^4	< 10	99.9	
Antibacterial test	BLANK		1.2×10^4	1.2×10^4	-	
MRE	Speed Pump Pump-It (Pump-It)	1.2×10^4	< 10	99.9		

2019.11.18

Korea Conformity Laboratories

99.9% Removal of Pneumococcus

**99.9% Removal of
Pneumococcus**

Does V SHIELD affect viruses, like Corona virus?

Yes, Chlorine dioxide is tested against SARS-COV-2 and Pneumonia with 99,9 effectiveness.

Any studies on V SHIELD Multipurpose Clip against viruses?

There has been done certified independent lab tests and studies on Chlorine Dioxide (CLOBIO) on germs, bacteria, fungus and virus and SARS-COV-2 such as Pseudomonas aeruginosa, Vibrio mimicus, Colon bacillus, Staphylococcus Aureus, Salmonella, Candidemia to name a few.



V SHIELD™

V SHIELD Sterilization Multipurpose Clip
henrik@v-shield.ch

