



VK

Natural Organic Virus Sanitizer

www.caltecbio.co.kr

COVID-19

OUT CORONAVIRUS

Naturally Derived Ingredients—

VK-SPRAY

Protect your family from harmful germs and viruses with VK disinfectant odor eliminator!



Ministry of Health and Welfare



This product was developed with high purity calcium manufacturing technology certified by the Ministry of Health and Welfare as New Excellent Technology (NET).

1

Product



VK Spray 10.58 oz(300ml)



VK Spray 2.11oz(60ml)



VK Spray 176.3oz(5L)

2

Product Features

Point 01

No Chemical Composition, No Alcohol & Only Natural Ingredients

Point 02

World unique anti-viral and anti-bacterial disinfectant made with natural coral calcium

Point 03

Certified by the Ministry of Health and Welfare as New Excellent Technology (NET) in Korea.



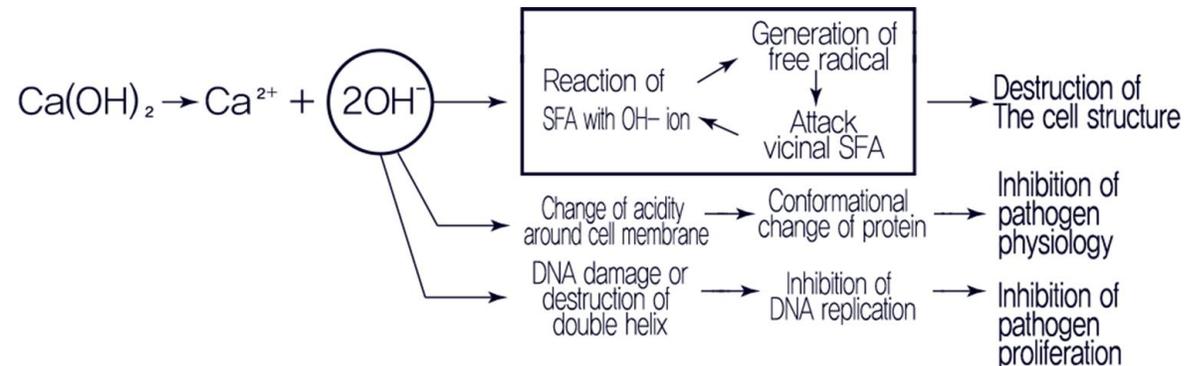
**Safe and reliable virus sterilization deodorant
made only from natural ingredients.**

3

Sterilization Point

Coral Calcium + Cypress Oil = 99.9% disinfection and odor elimination

- VK's coral calcium aqueous solution has a strong alkalinity with pH 11 or higher, and the hydroxyl ions (OH⁻) in the coral calcium aqueous solution induce a chain radical reaction of fatty acids in the cell membranes of bacteria, destroying cellular structure. In addition, it turns the acidity around the bacteria into strong alkalinity to weaken its physiological activity, and damages the double helical structure of RNA to restrain bacterial growth.
- The terpene-like hydrophobic material of cypress oil is another ingredient in VK. It is adapted to hydrophilic environment and destabilizes the outer structure of bacteria and inhibits its function to suppress multiplying of bacteria and destroy it.



4 Patent



Water soluble mineral powder manufacturing system



Water soluble mineral powder manufacturing method



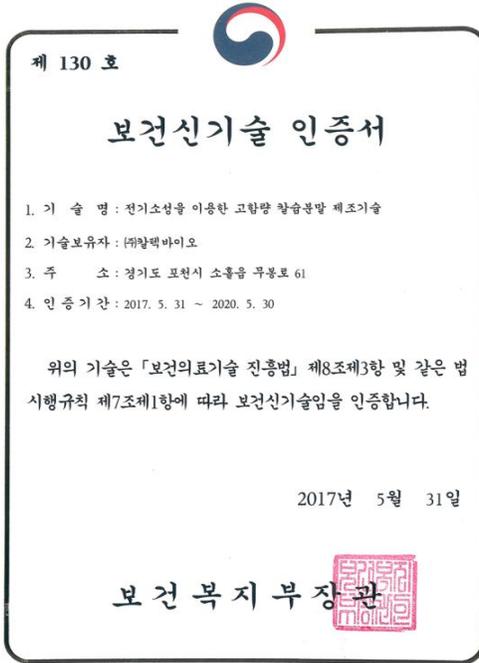
Chicken mite pesticide manufacturing method

5

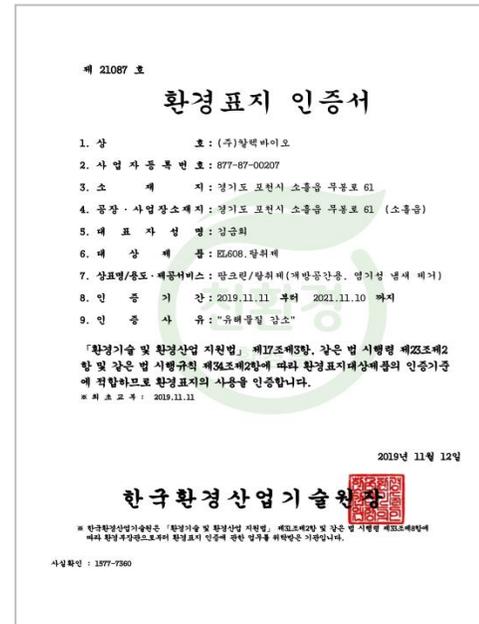
Certification



미국 FDA 의약품 등록



New health technologies certified by Ministry of Health and Welfare



Eco-friendly certification

6 Test Report

VK Spray test Human Coronavirus 99.999% disinfection

TEST REPORT

98, Gyooyukwon-ro, Gwacheon-si, Gyeonggi-do, 13810, Korea TEL 82-2-2164-0011 FAX 82-2-2634-1008

Report No : TBK-2020-00594 Receipt Date : 2020.07.20.
 Representative : Geum-Hee Kim Test Completion Date : 2020.09.10.
 Company name : CALTEC BIO Co., Ltd.
 Address : 61, Mubong-ro, Soheul-eup, Pocheon-si, Gyeonggi-do, Korea.

Sample name : VK (Virus Killer)

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Virucidal test (Human respiratory syncytial virus)	Log reduction	-	≥5.00	ASTM E1102-20
Virucidal test (Rotavirus A)	Log reduction	-	≥4.00	ASTM E1102-20
Virucidal test (Human coronavirus)	Log reduction	-	≥2.13	ASTM E1102-20

TEST RESULTS

TEST ITEM	UNIT	SAMPLE	RESULT
Virucidal test (Human respiratory syncytial virus)	Log reduction	-	≥5.00
Virucidal test (Rotavirus A)	Log reduction	-	≥4.00
Virucidal test (Human coronavirus)	Log reduction	-	≥2.13

Usage of Report : QUALITY CONTROL

Note : 1. The test results of this test report are only limited in to the samples and sample names provided by the client and do not guarantee the quality of all products of the client. You can check website (www.ktr.or.kr) or QR code to verify the authenticity of the certificate.
 2. This test report shall be used only within the purpose of its defined usage and shall not be used for public relation, advertisement and lawsuit.
 3. This test report is only valid when printed on KTR original report paper with hologram and when re-issued by KTR. The copy and the electronic file of the test report are only for reference.

Prepared by Hyun Ho Kim
 Reviewed by Jin-Sik Cho
 Tel : 02-3092-3956

2020.09.10

Korea Testing & Research Institute
 President

Page: 1 of 3

Sample name : VK (Virus Killer)

Test Results			
TEST ITEM	UNIT	SAMPLE	RESULT
Virucidal test (Human respiratory syncytial virus)	Log reduction	-	≥5.00
Virucidal test (Rotavirus A)	Log reduction	-	≥4.00
Virucidal test (Human coronavirus)	Log reduction	-	≥2.13

Sample name : VK (Virus Killer)

Test Results			
TEST ITEM	UNIT	SAMPLE	RESULT
- log reduction > 3:	> 99.9 %		
- log reduction > 4:	> 99.99 %		
- log reduction > 5:	> 99.999 %		
- Usage of Report : QUALITY CONTROL			

Testing organization: Korea Testing & Research Institute.

VK Spray test result certified 99.9% disinfection

KATR Korea Analysis Test Researcher (KATR)
 Tongli-ro 140, A-336 (Samsung Techno Valley, Goyang City, Gyeonggi-do)
 Tel : 1470 - 9936 | Fax : 02 - 6016 - 9711 | Email : katr@katre.kr

Test report

Request No. : KATRM200317-003 Request date : 2020. 03. 17
 Report No. : KAAAM200402-001 Issue date : 2020. 04. 02
 Company : CaltecBio Co. Ltd. Purpose of use : Account submission

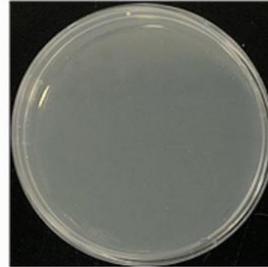
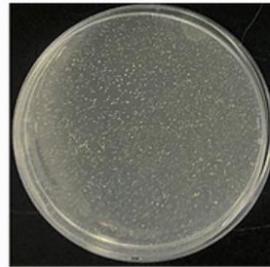
Address : 61, Mubong-ro, Soheui-eup, Pocheon, Gyeonggi, Korea
 Person : Geunhee, Kim
 Submit company :
 Name of sample : VK Spray

Test item	Test result	
	Control	Sample
Guidelines for evaluating external disinfectant efficacy		
<i>Staphylococcus aureus</i> ATCC 6538	Number of bacteria after 5 min (CFU)	3386 72
	Bacteria reduction rate (%)	97.9
<i>Escherichia coli</i> ATCC 8739	Number of bacteria after 5 min (CFU)	5047 <10
	Bacteria reduction rate (%)	99.9

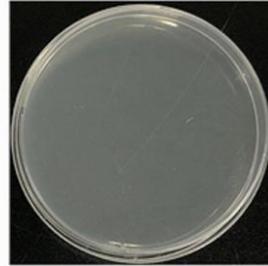
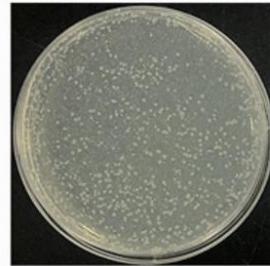
※ Test method: *in vitro* method
 ※ Contact time: 5 mins
 ※ Bacteria reduction rate (%) = [(average CFU of control)-(average CFU of sample)]/(average CFU of control)×100

Korea Analysis Test Researcher

Remark: 1. This report is the result of test conducted by company's samples only. It does not guarantee the quality of all products.
 2. This report cannot be used for advertisement, campaign, and legal purpose without KATR's permission. Do not use for any other purposes.



Staphylococcus aureus
ATCC 6538



Escherichia coli
ATCC 8739

Test result	
Control	Sample
3386	72
	97.9
5047	<10
	99.9

Testing organization: Korea Analysis Test Researcher

VK Spray test result certified 99% odor elimination

한국분석시험연구원 (KATR)
Korea Analysis Test Researcher
Tel : 1670 - 9936 | Fax : 02 - 6016 - 9711 | Email : katr@katr.re.kr

시험성적서

접수번호 : KATRM200310-013 접수일자 : 2020. 03. 10
성적서번호 : KAAAM200312-018 발급일자 : 2020. 03. 12
신청회사 : ㈜칼텍바이오 용도 : 품질관리

주소 : 경기도 포천시 소흘읍 무봉로 61
담당자 : 박승규
제출처 :
시료명 : 브이케이

시험항목	시험결과	
	암모니아	트리메틸아민
KS I 2218:2009 검지관식 가스측정기		
<시험시간>		
30분	95%	80%
60분	99%이상	95%
90분	99%이상	95%
120분	99%이상	95%

* 주) 1. 시험조건
- 시료 재질: 역상
- 시료량: 5.0 mL
- 주입된 시험가스의 농도: 2 L, 100 ppm
2. 시험환경: 온도 23 °C, 상대습도 45% RH
3. 소취율(%) = (최초 가스농도-측정 가스농도) / 최초 가스농도 X 100 (%)

한국분석시험연구원

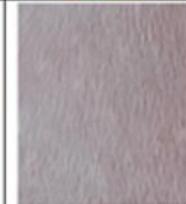
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담당자 : 박승규
제출처 :
시료명 : 브이케이

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KS I 2218:2009 검지관식 가스측정기		
<시험시간>		
30분	95%	80%
60분	99%이상	95%
90분	99%이상	95%
120분	99%이상	95%

Completed with VK skin irritation test

	24시간		48시간		72시간	
	비처리	처리	비처리	처리	비처리	처리
	비찰과					
찰과						

이상의 결과에서 시험물질은 일차자극지수(P.I.I.)는 “0.09”로 토끼의 피부에 대해 자극성이 없는 ‘비자극성’ 물질로 평가되었다.

VK 스프레이 피부반응 평가표

구분 동물 번호	대조부위								처리부위													
	홍반 및 가피형성				부종				홍반 및 가피형성				부종									
	비찰과		찰과		비찰과		찰과		비찰과		찰과		비찰과		찰과							
	24	48	72	24	48	72	24	48	72	24	48	72	24	48	72	24	48	72				
1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
평균	0		0.17		0		0		0		0.17		0		0							
평균 의 합	0.17				0.0				0.17				0.0									
총합	0.17								0.17													
P.I.I	0.09																					

* Time after topical application

P.I.I.: Primary irritation index = Total score/4

Testing organization: College of Vet. Med., Gyungsang Univ.



FDA Status

FDA Registerd

FDA U.S. FOOD & DRUG ADMINISTRATION Follow FDA | En Español

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National Drug Code Directory

Current through May 26, 2020

You have searched **Finished drug products**

Search Results: '77083-201-02'

[Back to Search Page](#) | [Search Again](#)

CSV Excel

Display 50 records per page

Proprietary Name	NDC Package Code	Strength	Dosage Form	Route	App. No.	Labeler Name	Product NDC	Nonproprietary Name	Substance Name	Product Type Name	Start Marketing Date	End Marketing Date	Market Category	Package Description	Pharm Class	DEA
VK	77083-201-02	.0053 g/100mL, 1 g/100mL, 5 g/100mL	LIQUID	TOPICAL		CaltecBio Co., Ltd	77083-201	Cypress oil, Eucalyptus oil, Coral calcium (CT-CCP40)	CALCIUM HYDROXIDE; EUCALYPTUS OIL; CUPRESSUS SEMPERVIRENS LEAF OIL	HUMAN OTC DRUG	05/10/2020	N/A	UNAPPROVED DRUG OTHER	300 mL in 1 BOTTLE, SPRAY (77083-201-02)	N/A	N/A

<https://www.accessdata.fda.gov/scripts/cder/drls/default.cfm> NDC NO: 77083-201-02



8 Use

Harmless and safe product optimized to daily living disinfection



Protect yourself from germs or viruses by spraying on objects or places that are most frequently touched in your daily life, such as mask, hands, smartphone, or vehicle. Protect children's toys, kitchen space, toilet, or door knobs from viruses and keep your family safe.

Manufacturing process of VK virus sanitizer by exclusive **coral calcium manufacturing technology** in the world



Natural coral calcium
(freshly produced in Sebu, Philippines)



Temperature-varying calcination at 1,000°C for 24 hours
by patented technology of our company



Bottling



Preparation of coral calcium
solution and stirring



Production of highly purified calcium by nine day
maturation of calcinated coral calcium

THANK YOU

CaltecBio Co., Ltd.
www.caltecbio.co.kr

CaltecBio

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