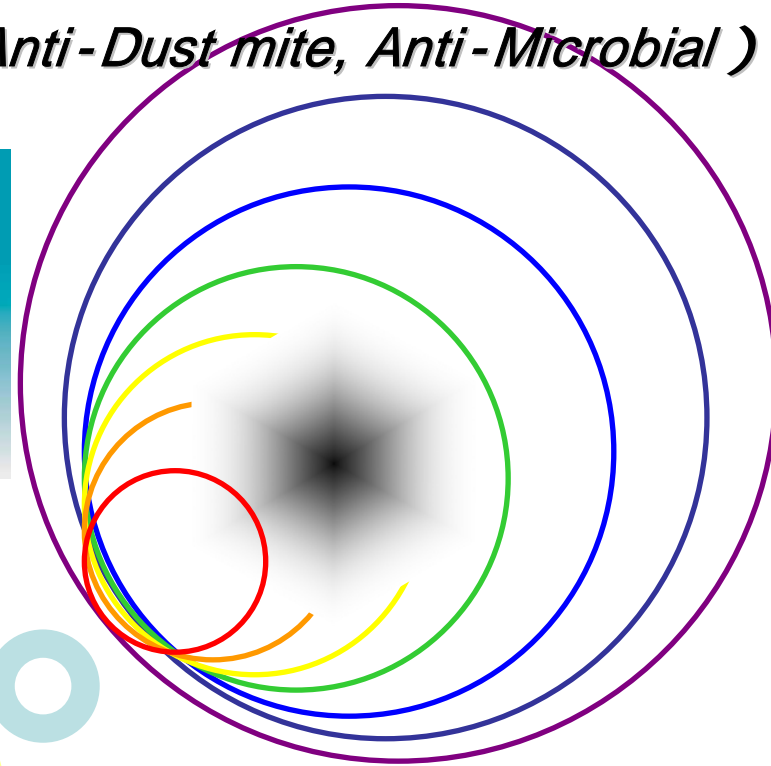


We dominate everything in surfactants.

Vita Health (Anti-Mosquito, Anti-Dust mite, Anti-Microbial)



Worldwide Leader

ILSHIM FINE CHEMICALS

www.chemicalkorea.com

Tel : 031-987-8386/7

Evasion Effect to mosquito by Vita Health AM



- Mosquito (Genus Aedes) act as an intermediary in infecting Malaria virus and moreover, recently they make frequent appearance even in winter season because of the change of housing conditions.
- In contrast to the past, the number of infected patients of encephalitis or malaria are increasing because of rapid change of circumstance.
Acknowledging these problems, for the purpose of harmlessness to human body and setting free from mosquitoes, we developed the “Vita Health AM” which is a finishing treatment on fabrics and then marketing it through various stability tests.
And also we developed and marketing “ Vita Health AM ” which is a kind of expeller of anti-dust mites and anti-microbial.
- Our “ Vita Health ” is made of Pyrethroid ester of which main raw material is natural extract.
- Experiments for Mosquito evasion taken by technology Team of our company result in excellent outcome.

Methods of Experiments for Mosquito Evasion of Vita Health AM



- Capture Mosquito and Status before Experiments
 - We captured the mosquitoes (Genus Aedes) at the mountain on Daemyung-Ri of Kimpo area near ILSHIM fine chemicals company. Then after we brought them for 5 days, we took only the females for our experiments (females do not bite), however, the females had not been fed for 24 hours before the tests.
 - Design
- We arranged each 3 pieces of samples for both treated ones and not-treated ones with Vita Health PL. We managed each 10 of mosquitoes, then pasted on a testee's arm both the treated samples and the not-treated ones, then we observed 10 mosquitoes' acts in a box with a size of 30cm x 50cm.

Results of Test



- On the non treatment samples, mosquitoes frequently touched down and sucked in bloods, but on the treated sample with “Vita Health AM”, at first they tried to grounded on it, soon evade the mothproofed samples except simple touches. A few mosquitoes landed on the sample fabrics which processed by “Vita Health AM”
- We observed that immediately after they touched down on the samples, then evaded. They showed the same behavior as of touching stimulus.
- Most mosquitoes located on the far edge of the experimental box and during the whole hours of experiment they did not moved out from the places.

Experimental Result of Genus Aedes mosquitoes' Refraining



Contents	T I M E S	No. of Mosquitoes	No. of Landing (*)	No. of Injection	No. of Sucking blood	No. of the Knock-down after 10 Minutes	No. of the Knock-down after 20 Minutes	No. of the Knock-down after 30 Minutes
Non - treatment	1	10	10	9	8	0	0	0
Non - treatment	2	10	9	9	9	0	0	0
Non - treatment	3	10	10	10	10	0	0	0
Average			9.7	9.3	9.0	0.0	0.0	0.0
Treated with Vita Health	1	10	3	0	0	0	2	5
Treated with Vita Health	2	10	8	1	0	1	5	7
Treated with Vita Health	3	10	4	0	0	0	1	3
Average			5.0	0.3	0.0	0.3	2.7	5.0

(Mark * is a number of mosquitoes which remain over 5 seconds.)

Evaluation for the Experimental Result



- As a experimental result, It can be said that the data related with the mosquitoes' landing and that of their bitings are not the same.
- Actually with 15 times of landings, only one time of bite was appreciated.
- After 8 seconds after biting, mosquitoes can suck in and the virus can infect after 10 seconds elapsed after biting.
- During the first 10 minutes in the experiment, only one out of 10 mosquitoes was knocked down which touched "Vita Health AM", and after 20 minutes elapsed the number of the knock-down ones increased,

and after 30 minutes elapsed, on the average 5 mosquitoes (50%) knocked down.

- Consequently, fabric which treated with "Vita Health AM" played an excellent role as fabrics for mosquito proof. Because the basic raw material of "Vita Health AM" is made of natural material, it is rather far from toxic matter.
- We, ILSHIM fine chemical company requested the experiment to Korea Apparel Testing & Research Institute and got notified as a result that it is proved negative through the toxicity test for taking medicine (LD50) and also proved negative with which no sign of mutation was found with mouse in mutation test.

Company name Try Brands

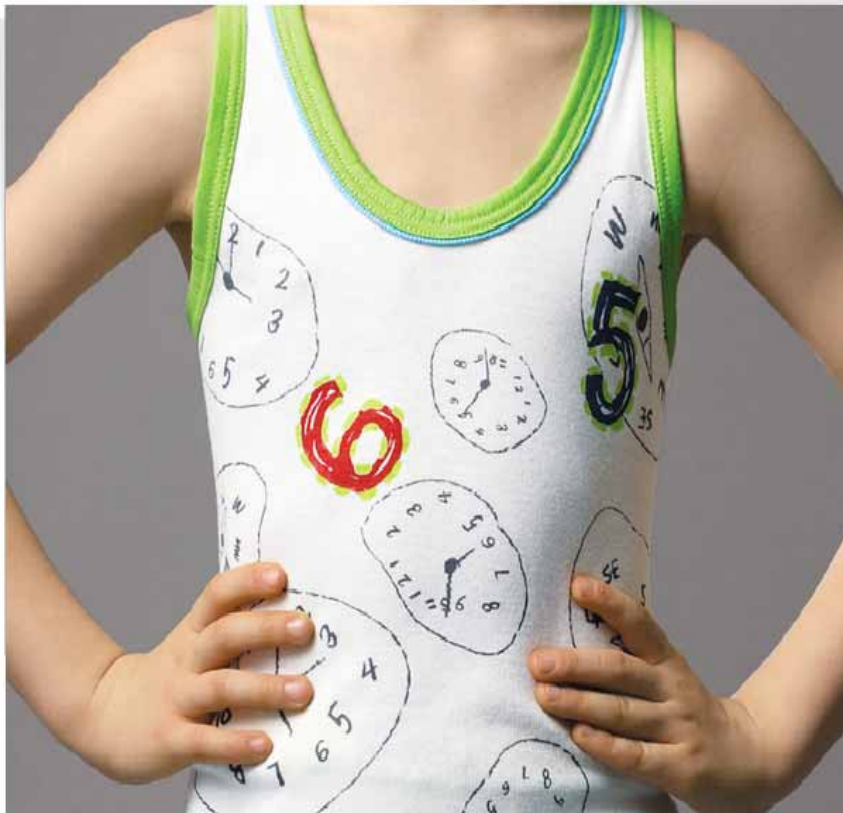
[TRY] 비타헬스가공 남아용 고급런닝 5종

시간과 공간의 이미지인 시계와 나침반, 숫자들의 조화로 아이들의 상상력을 일으키고 그린계열의 칼라메치로 유려피안 스타일의 분위기를 연출한 고품격상품

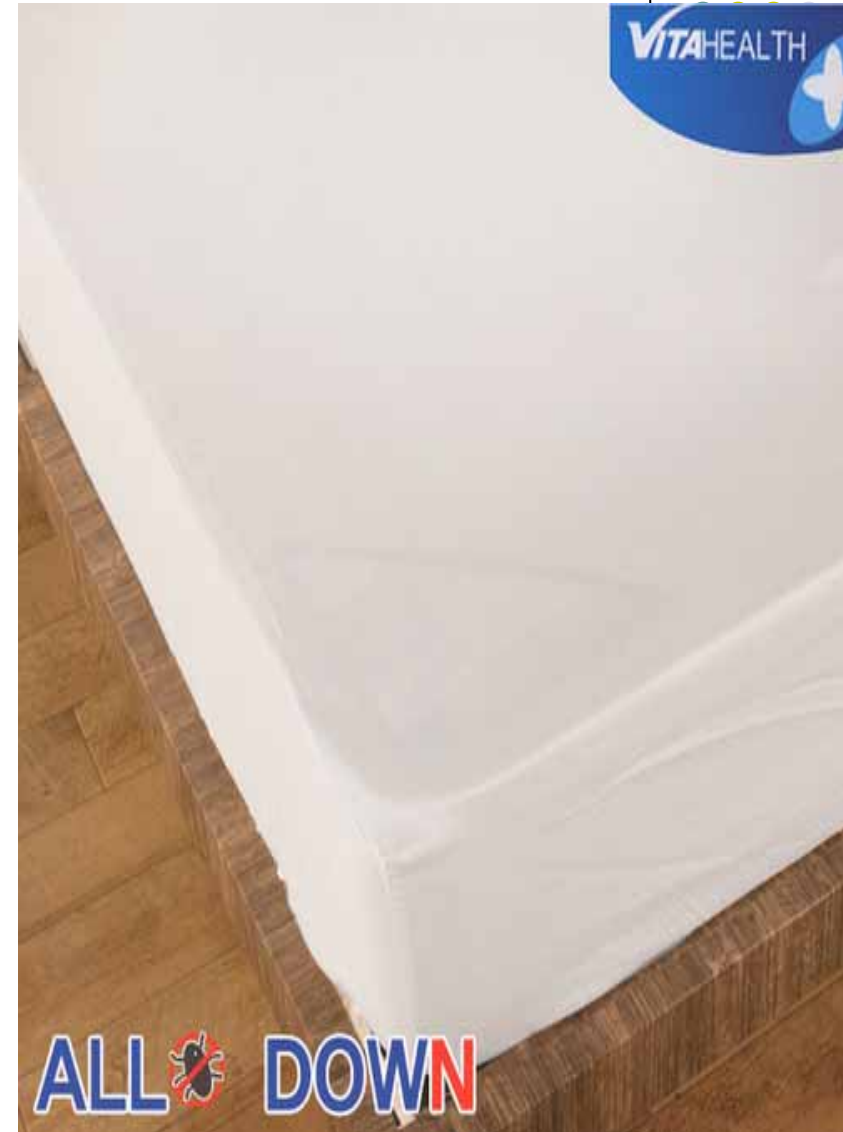
색 상 : 카키날

사 이 즈 : 60,65,70,75,80,85

혼 용 료 : 면100%



Company name Royce Bed



Are you surely safe from allergy, Malaria or bacteria?

Vita health will protect you and your children from Allergy caused by dust mites and Malarya and Bacteria caused by Mosquitoes.

you can find difference

Wellbeing Life

If you use Vita Health on fabric clothing, bedclothes and carpets, you will be protected from dust mites, mosquitoes and bacteria. As Vita Health is made of natural raw material, it lessens toxicity to human body.

Vita Health's Functional Features

diminish allergy by avoidance of house dust and dust mites
Liberate from Malaria by avoidance of mosquitoes
Give anti bacteria by excellent anti bacteria function

Vita Health's Avoidance Test

(FITI Testing & Research Institute
Report No. 526203-028-1)

Anti-dust mite

Method of Test	Results
A method for keeping off the invasion	95. 2
A method of keeping off the spreading	94. 8
A Mothe of glass tube	96. 3

Anti-Mosquitoes

Sample	Alighting	Biting	Feeding	KO 10	KO 20	KO 30
Control	9.7	9.3	9.0	0.0	0.0	0.0
Vita health	5.0	0.3	0.0	0.3	2.7	5.0

Anti bacterial Activity Test (KSK 0693-2001)

(FITI Testing & Research Institute Report No. 51-62-04-00352)

Bacterial Name	Average Rate of Deceation
Staphy lococcus aureus ATCC6538	99. 9
Klebsiella Pneumoniae ATCC4312	99. 9

Vita Health Toxic Test

- Skin patch test** (FITI Testing & Research Institute Report 5262-03-28)
All of the 20 subjects did not show a reaction of (5) by microscopic judgement (B-Stage).
Test Substance, Vita Health did not induced skin stimulation under the conditions of test. The results of skin patch test was negative (OB)
- Ames Test**
(Korea Apparel Testing & Research Institute, Report No. SQ 05-90000061)
Test Method : ISO 10993-3, OECD 47 1
Vita Health is judged not to evoke reverse-mutation to five polymerase
- Sing time medication toxic test**
(Korea Apparel Testing & Research Institute, Report No. SQ 90000061)
Test Method : (Korea Food & Drug Administration Notice No. 2005-60, Toxic Test Standard for Food & Drug)

Amount of Medication	Results
0 mg/kg.	• Dead animals were not observed in any group of medicated group.
500 mg/kg.	• Peculiar symptoms have not been observed for all animals during the test.
1,000 mg/kg.	• No change of weight by testing materials was observed.
2,000 mg/kg.	• For all animals, abnormal opinion have not observed.