

-Patented Procedure-



International
Total Solution
Taiwan inc

Lipopolymer Coated Nattokinase

Nattokinase



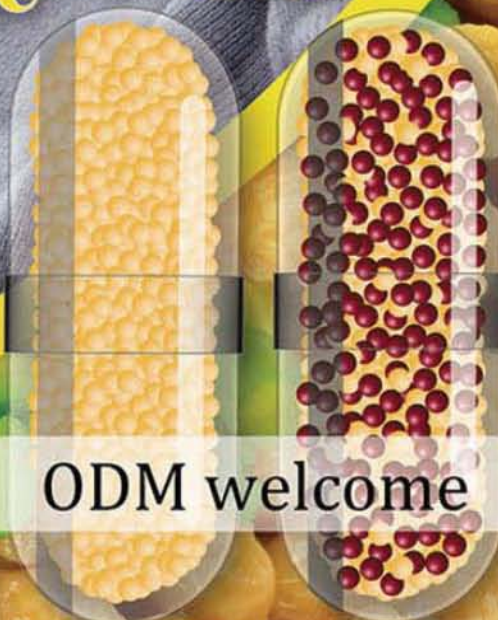
High activity patented Nattokinase

- 2 kinds of specifications to choice, and it's suitable for any dosage form developed.
- Per experiment to proved the activity of Nattokinase is still exist when it's on the intestines.
- Without Purine, it's applicable for the group of gout and higher uric acid.
- Eliminate vitamin K2
- Top quality, the content of high unit owns stable function ingredients.
- Owns the appraisal report of fungus and the sequence report of gene.

Exclusive technique,
nattokinase won't be
damaged by gastric acid

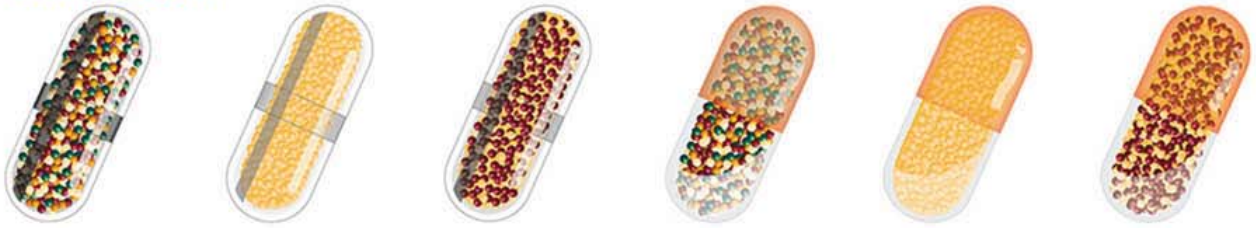
**Exclusive technique
for Patent Coated**

**Nattokinase in
35000FU/g**



ODM welcome

Welcome ODM:



The Group of high danger of the thrombus

The human body owns the basic functions of hemostasis and resist clot. When imbalance. It will be lead the clot or hemorrhage.

The serious health problem caused of thrombus, such as : Myocardial Infarction(MI), hemispheric infarct. ischaemic heart disease, apoplexia and etc.

Angiocardiopathy, High blood pressure,(H/T,HTN.), hyperlipemia, venous embolism, lung embolism, economy class syndrome, Alzheimer's disease etc. (Japan Functional Food Research Association, BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, VOL.197, NO.3, 1993.) It's maybe the reason of the portent of thrombus when the hand and foot feel cold, myofascial pain syndrome, dazed,myodesopsia and etc.

Besides, it's more easily to suffer fram the symptom of thrombus if the group of partiality for a particular kind of food, heavy pressure, irregular lifestyle, older, diabetes. (J.of Jिंगgangshan Medical College)

What 's Nattokinase:

The cooked soybean attach the special zymolysis fungus (Becillus Subtilis natto). Japanese use the straw to cover the cooked soybean , and keep the specific temperature to promote the fungus of Natto to plenty breed and completed ferment . it'll come into begin the special ferment: Nattokinase.

Nattokinase is one kind of Naturally thrombus lytic enzyme. The biggest different between the common thrombolytic agent is the Nattokinase for take orally, it can be sustain action many hours, but the inject style , it will be get the affect within tens minutes only, and it will be caused the side effect of haemolysis , and the price is expensive relatively.

Nattokinase can eliminate the irregular blood clot from the blood, and these clot is the reason for thrombus of dementia apoplexy, Cardiac infarction, limp and numb, dementia

The function

1. Nattokinase can directly to dissolve the fibrin of human body, fibrin is substance when blood solidified, and it will be cause to thrombus on the blood vessel.
2. Help to forward the activation of fibrin dissolved system , such as the urokinase became to activity Urokinase, and tissue plasminogen activator, t-PA, it can be indirect effects the decompose of thrombus.

Other research

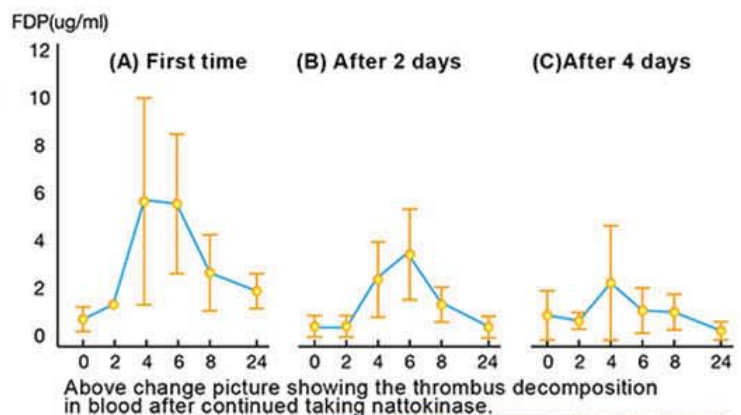
1.Nattokinase can improve the flowing of blood,

It can be promoted the flowing of blood within one week after taking orally Nattokinase, the obvious effect is for older man and chronically sicker. This result is test by Japan special blood flow rate machine.

2.Nattokinase can decompose the thrombus per human body via experiment to proved

The result indicated the nattokinase can obvious reduce the dissolve time of thrombus and add the ability of the volume thrombus dissolved.

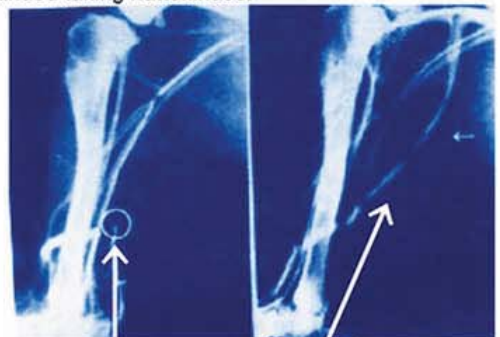
The effect of dissolve thrombus can be continue 2-8 hours after taken orally Nattokinase. The effect is more longer time than other dissolve medicine of thrombus , it's helpful for clinical Practice of thrombus cured.



3.Nattokinase can get blood flow smoothly again once blood vessel embolism

For animal research: dissolve clot and insert to arteria cruralis and proceed the estimate of angiography, take the picture in 2.5 ,5,12,18,24 hours, when the picture is regular ,and it's no any effect after compared , but take orally the Nattokinase after 5 hours can make sure the thrombus has be completed dissolved.

The venous embolism on the foot of dog has be obvious flowing smoothly. (H.Sumii, Acta Haematol., 84, 139,1990)



(Enhancement of the fibrinolytic activity in plasma by oral administration of nattokinase. Acta Haematol. 1990;84(3):139-43)

4. Nattokinase can restore blood vessel blocking of eye ball

It owns good protect function for retinopathy and tiny blood vessel hyperplasia. Especial the diabetic is easy to fall ill the cataract and glaucoma, numbness of Brain God muscle and retinopathy. The ingredients of Nattokinase not only can get best flow of blood but also remove the thrombus from micrangium of eyeball

Meanwhile, it can reduce the oxidation LDL accumulated in the wall of micrangium .

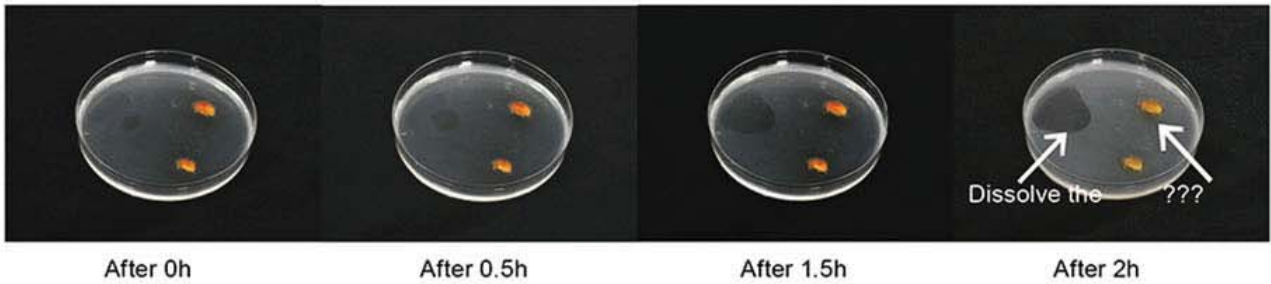
By science researched that Nattokinase ferment liquid owns the function of anti-inflammation , also can prevent the micrangium proliferation, the precursor of retinopathy is micrangium proliferation.

The procedure of Nattokinase



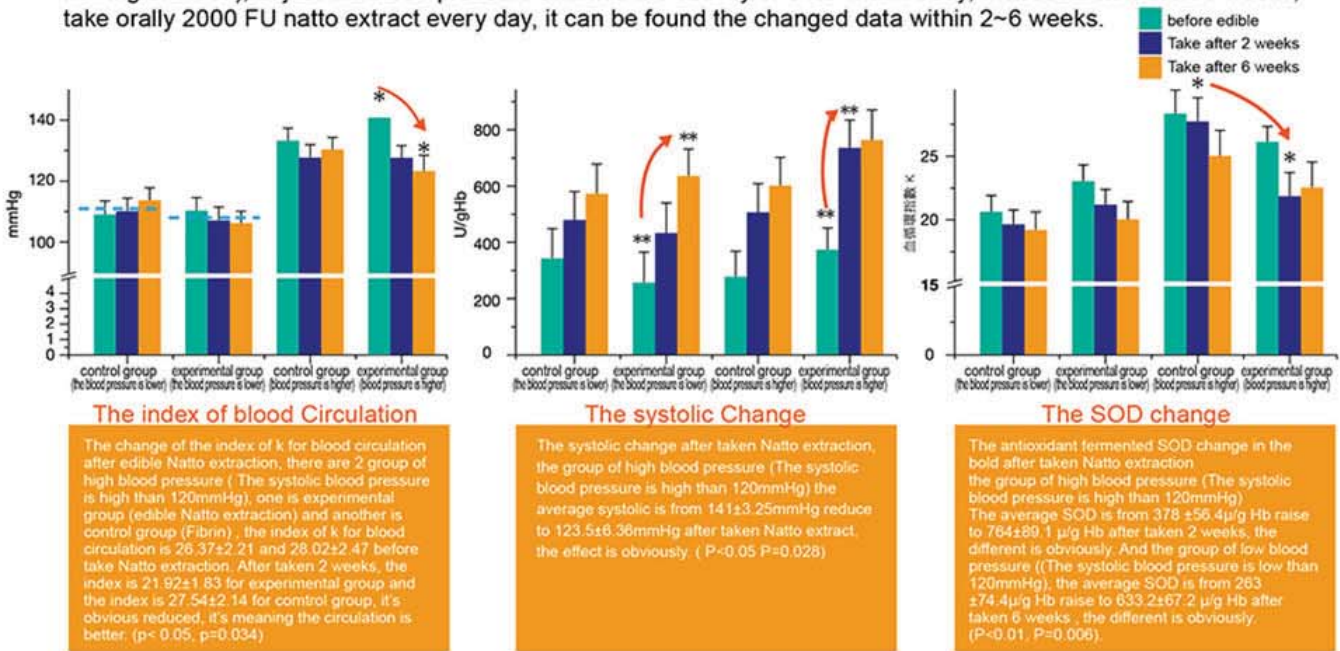
The experiment of Nattokinase:

1. The test of dissolve Thrombus :



2. The Clinical trials of human body:

In the research of Natto extraction indicated to take orally Natto extract is good for improved the circulate (Add the flowing of blood), adjust the blood pressure and add the activity of SOD within body, the research is total 6 weeks, take orally 2000 FU natto extract every day, it can be found the changed data within 2~6 weeks.



3. Heating test:

Take 1 g from 3 kinds of sample and put on the 3 pcs 10ml test tube, and place the tube in the water tank with 80 C degree and 100% relative humidity, then take 0.2g sample after 0, 10, 20, 30 minutes and place them on the ordinary temperature

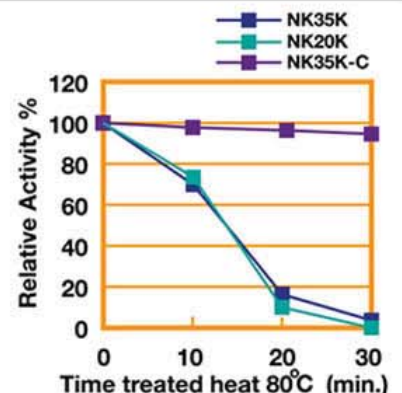
A. The heat stability of coated Nattokinase :

The technique can protect Protein , it won't be broken by high temperature, This test is make sure the Coated Nattokinase can resist high temperature

Samples	Time(min)	0	10	20	30
NK35K(FU)		36,470(100%)	23,450(64.3%)	6,601(18.1%)	729(2.0%)
NK20K(FU)		26,730(100%)	19,058(71.3%)	2,191.8(8.2%)	0(0%)
NK35K-C(FU)		36,470(100%)	34,973(96.3%)	34,576(95.7%)	33,637(93.1%)

B. Conclusion:

Even in the strict manufacture process, the coated 35000 FU Nattokinase is still can resist the high temperature.



4.The experiment the activity change in gastric acid:

The step of test:

Take 1g from 3 kinds of sample and put on the 3 pcs 10ml test tube, the tube is including 10ml 6N Hydrochloric acid Liquid (HCl),(PH:2) place the tube in the water tank with 37 C degree and shake evenly, then take 0.2g sample after 0, 10, 20, 30 minutes and place them on the ordinary temperature.

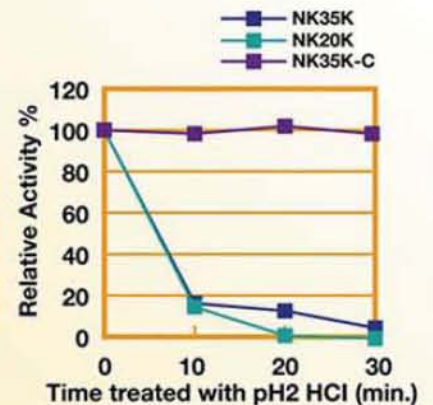
A.The acid resisting property of Coated Nattokinase:

The Nattokinase is function food by take orally, It's popular recently, it's like enzyme. The nature will be changed in stomach due to gastric acid. For our technique can make sure the protein of Nattokinase doesn't be damaged by hydrochloric acid and the nourishment can be complete to arrival at intestines.

Samples	Time(min)	0	10	20	30
NK35K(FU)		37,200(100%)	6,310(17.0%)	4,330(11.6%)	1,820(4.9%)
NK20K(FU)		35,450(100%)	3,870(15.2%)	20(0.1%)	0(0%)
NK35K-C(FU)		36,700(100%)	36,090(98.3%)	37,241(101.5%)	35,870(97.7%)

B.Conclusion:

In the emulate situation of gastric acid, The coated 35000FU Nattokinase is still can resist the acid fast degree.

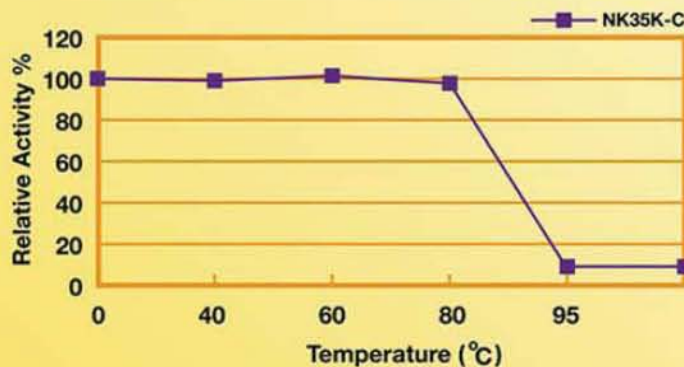


5.The challenge of high temperature test

A.The step of test

Take 10g sample in 10ml test tube, and place the tube in the water tank with the 40, 60, 80 and 95 C degree, 100% relative humidity, after 30 minutes, take 1g sample and place it on the normal temperature.

Samples	Temp.(°C)	0	40	60	80	95
NK35K-C(FU)		37,120(100%)	37,045(99.8%)	37,751(101.7%)	36,299(97.6%)	3,080(8.3%)



A.The heat stability of Coated Nattokinase

The coated technology can protect protein, don't damaged by high temperature. the reason of this test is to make sure the cover coated nattokinase can resist high temperature.

B.Conclusion:

Coated 35000 FU Nattokinase can resist the 80 °C temperature, and the activity will be reduced slowly if the temperature is high 80 °C temperature .

Test Report

Without Purine



Test sample : there are 3 kinds of samples

- 1.NK35K : Without coated 35000FU Nattokinase
- 2.NK20K : Without coated 20000FU Nattokinase
- 3.NK-35C : Coved 35000FU Nattokinase

The specification of product : 35000FU/g , 20000FU/g, 5000FU/g

The recommended human dose: 2000FU/day, suggest to take time before sleep. (the blood is more easy to congealed in the night, it's easy to become thrombus.)

Storage mode : Nattokinase must be storage in the shady and cool place and avoid on the high temperature to change the color & taste It can be storage in the normal temperature within 2 years.

Notice : Please pause to take the Nattokinase as below situation :

The surgical operation before & after 2 weeks.

The initial sufferer of apoplexy: Due to the emphraxis of blood vessel or broken, it's must be restored in period of time .(it can be taken if the sufferer with emphraxis of blood leave the hospital, the blood vessel slight broken can be take Nattokinase after one month at least , Other illness of blood congealed, please ask Doctor about this issued first.