

Nutraceuticals



Nutri-K™, Nutri Granulations' new, high potency Vitamin K2, as menaquinone-7 (MK-7), is an advanced, fat-soluble form of vitamin K that serves multiple functions in the body. The K family consists of a trio of vitamins: K1, naturally occurring in leafy green vegetables and plant oils, K2, present in butter, cow liver, chicken, certain cheeses and fermented soybean products like the Japanese food Natto, and K3 which is a synthetic form of the vitamin. K3 has been shown to have toxic effects on the liver and K1 does not last long enough in the body to be effective unless taken in higher, more frequent doses. Of the three, K2 in the form of MK-7 (not MK-4 which has a much shorter half-life - only 4-6 hours) is the only one shown to offer 24-hour protection from a single daily dose.

Vitamin K2's many functions include acting as a potent antioxidant and assisting the clotting mechanism of the body. New research is also exploring Vitamin K2's role in the prevention of age-related diseases including Alzheimers disease as well as certain blood disorders such as MDS (myelodysplastic syndromes). However, the discovery of Vitamin K dependent proteins in bone has revealed the vitamin's most important function – aiding bone development by acting as a regulator and director of calcium in the tissues. Vitamin K2 helps to guide calcium towards areas of the body where it is needed such as the skeletal system, and away from areas where it could have a negative affect such as the cardiovascular system. This function allows for more efficient calcium distribution and helps protect against arterial calcification – major factors for the prevention of osteoporosis and cardiovascular diseases.

Although calcium can be found easily in foods and dietary supplements, it is not necessarily absorbed without going through a number of important biochemical steps. Without proper direction, calcium could eventually bind to the arteries (resulting in calcification) instead of the bones (resulting in loss of bone density). Studies show that Vitamin K2 is very active in the tissues where it serves to increase the absorption of calcium into the bones by facilitating the mineral-binding function of osteocalcin1 – an important protein synthesized by the bone forming cells called osteoblasts – thereby helping to build bones as well as hold calcium in place in the bones. Vitamin K2 is also instrumental in activating the Matrix G1a protein (MGP), a powerful inhibitor of soft tissue calcification².

Nutri-K is available in powder form and contains **2000mcg of K2 per gram – the highest potency available**. Contact your E.T. Horn representative for more information.

Additionally, Nutri Granulations has developed K2Cal™, a unique blend of calcium, Vitamin K2 and Vitamin D3. K2Cal provides an adequate amount of daily calcium coupled with two essential nutrients proven to aid in the absorption of calcium. Customized blends are available upon request.

1. Zitterman A. Effects of vitamin K on calcium and bone metabolism. *Curr Opin Clin Nutr Metab Care*. 2001 Nov;4(6):483-7.
2. Geleijnse J, Vermeer C, Grobbee D, Schurgers L, Knapen M, van der Meer I, Hofman A, Witteman J. Dietary Intake of Menaquinone is Associated with a Reduced Risk of Coronary Heart Disease: The Rotterdam Study. *J. Nutr.* 2004 Nov;(134)3100-5.



**NUTRACEUTICALS
GROUP**



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PRODUCT SPECIFICATIONS FOR NUTRI-K™
(Item Code: NG-K2-2000 ppm)
Vitamin K2 (Menaquinone-7) Powder



COMPOSITION

Dextrin
Sunflower Oil
Sodium Casein
Starch
Glycerol Fatty Acid Ester
L-Ascorbyl Palmitate
Extract of Bacillus Subtilis Natto
Extract of Rosemary

CHEMICAL ANALYSIS

Vitamin K2 (as Menaquinone-7)
Heavy Metals (As Pb)

SPECIFICATION

1800 - 2400 mcg/g
≤ 30 mcg/g

MICROBIAL ANALYSIS

Total Viable Aerobic Count
Yeast and Mold
E. Coli
Salmonella SP.
S. Aureus

≤ 1000 CFU/g
≤ 100 CFU/g
Absent / 10g
Absent / 10g
Absent / 10g

PHYSICAL ANALYSIS

Moisture

≤ 10.0 %

Appearance

Light brown powder with
no offensive odor

Packaging

1 kg or 5 kg

Storage

Store in tightly closed
containers at less than 15°C

Shelf Life

Eighteen months if
unopened & stored as
recommended

Distributed by:



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