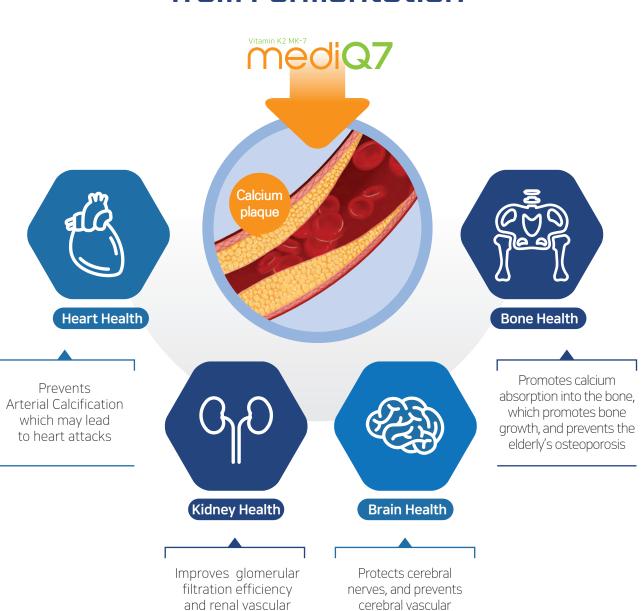




# **MediQ7**: The Natural Vitamin K2 MK-7 from Fermentation



100% natural fermented Vitamin K2 MK-7 derived from *Bacillus subtilis* natto strain High purity of all-trans type Vitamin K2 MK-7 produced by supercritical CO<sub>2</sub> extraction

function

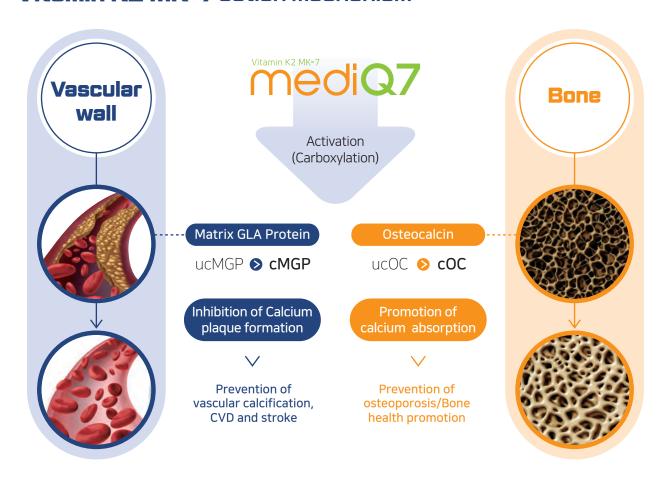
The most stable Vitamin K2 MK-7 by microencapsulation technology No preservative, No chemicals, No chemical synthesis, Non-GMO, No allergen

calcification and stroke

ISO9001 / ISO22000 Halal / Kosher / Vegan KGMP / GRAS

## Vitamin K2 MK-7

## Vitamin K2 MK-7 action mechanism



## Efficacies of Vitamin K2 MK-7



Cardiovascular health

Vascular calcification causes cardiovascular diseases such as arteriosclerosis, vascular stiffness, heart disease and myocardial infarction.

Vitamin K2 intake may help prevent coronary artery disease by preventing calcification of blood vessels.



Kidney health

It may inhibit the calcification of kidney blood vessels, prevent kidney stones and improve glomerular filtration efficiency. It may also help reduce cardiovascular mortality in hemodialysis patients.



It may prevent cerebral diseases such as Alzheimer's and stroke by inhibiting the calcification of cerebral capillaries



It may promote new dentin growth on the teeth, which reduces the occurrence of cavities and reduces the rate of tooth loss due to aging by activation of osteocalcin.



Children and teenagers need 8-10 time-fold osteocalcin which promotes calcium absorption for bone growth. Bone is mostly developed during childhood and adolescence, and more

than 90% of their maximum bone mass is formed by the ages of 18-20.

Vitamin K2 promotes calcium absorption into the bones making strong bones for children and teenagers, and it may prevent osteoporosis in adults.



## Competitiveness of MediQ7

#### **Natural Derivation**

100% natural Vitamin K2 MK-7 fermented with *Bacillus subtilis* natto

#### **International Specifications**

Meet USA's USP-DSC 2021 (USA pharmacopeia), European Novel Food and Chinese GB (Chinese national standards)

## **Ultra high Purity**

Ultra-high concentrated vitamin K2 MK7 (>96% MK7 conc. and 99.9% trans type) produced by supercritical  $\text{CO}_2$  extraction

#### **Safety and Certifications**

Non-GMO, No allergen, No preservative, No chemical, No chemical synthesis.

ISO9001/ ISO22000/ Halal/ Kosher/ Vegan/ GRAS / KGMP

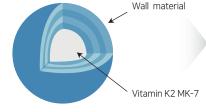
## mediQ7 Microencapsulated MK-7

#### Market Issues

#### Alkaline minerals such as Ca and Mg which are mainly used together reduce the storage stability of Vitamin K2 remarkably.

 Vitamin K2 is not easy to be applied to aqueous products as it is fat-soluble.

Microencapsulation



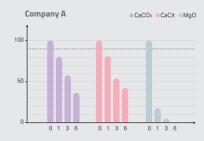
### Solution

- Microencapsulated MediQ7 protects Vitamin K2 from the minerals such as Ca and Mg that destabilize Vitamin K2 during the storage
- Microencapsulated MediQ7 is water-dispersible and it can be freely applied to all kinds of beverages, yogurt, and milk, etc.

## Stability (accelerated condition: 40°C R.H 75%)

MediQ7 microencapsulated K2 provides the sole solution for the K2 minerals stability problem which prevents many products from having less K2 content than that on the label.











## Certifications of MediQ7 Vitamin K2 MK-7

| KFDA Health Food GMP | Certified by KFDA for its quality assurance system of controlling production and quality across raw material incoming and product outgoing   |
|----------------------|--|
| Self-Affirmed GRAS   | Granted self-affirmed GRAS(Generally Recognized as Safe) status, a designation by the U.S. Food and Drug Administration (FDA), for use as a food ingredient  |
| Novel Food           | Meets the specifications approved as Novel Food by EFSA.   |
| ISO9001 / ISO22000   | Acquired international certifications such as ISO9001 and ISO22000 in QA/QC system which satisfies HACCP standards.  |
| Kosher / Halal       | Acquired international certifications such as Kosher and Halal which are strict control systems for the selection of raw materials and the production and storage system according to Hebraism and Islamic laws, respectively. |
| Vegan                | Acquired internationally recognized Vegan Certification for non-use of animal-<br>derived raw materials and no animal testing.   |
| Non GMO              | Guaranteed for non-use of genetically modified organisms (GMOs)  |















## **Company Profile**



GF Fermentech, a subsidiary company of GenoFocus, produces bioactive materials with core technologies based on strain development, fermentation, biotransformation, purification, and formulation. Over the past 20 years, we have been developing the best performing microbial strains and highly specialized extraction, purification, and formulation technologies, and we have been supplying the best-in-class bio-healthcare ingredients.

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- ·Homepage: www.gffermentech.com
- ·Vitamin K2 MK-7 homepage: www.mediq7.com