

vitaMK7[®]
Natural vitamin k2 as MK7

www.vitamk7.com

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 **Gnosis**
by Lesaffre

The optimal
vitamin K2
from natural
biotransformation



NATURAL

At Gnosis by Lesaffre, we harness the power of **biotransformation processes**. VitaMK7® is a perfect illustration as it comes from the fermentation of *Bacillus subtilis natto*, a natural source of vitamin k2 as MK-7.



LEARNING FROM NATURE

Gnosis by Lesaffre has been a **pioneer in the development of vitamin K2** as Menaquinone-7 (MK-7): our first production was launched almost 20 years ago!

From the origin, our research has been focused on a **unique natural microbial source of K2**: the bacteria *Bacillus subtilis natto*. VitaMK7® is therefore based on a **proprietary microbial strain** of this bacteria, deposited in DSM2 collection under the accession number DSM 17766.

Gnosis by Lesaffre production relies on an industrial patented fermentation process, which enables to maintain the naturalness and the indistinguishable potency of MK-7.

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EMBRACING THE CONCEPT OF CLEAN LABEL

“Clean label” refers to key attributes which are globally recognized and linked with transparency, wholesomeness of the ingredients and the lack of artificial/added components and allergens.

At the heart of the clean label is the demand to use ingredients with real nutritional benefits that are as close to their natural state as possible, like **ingredients from natural sources**, and to avoid highly processed ingredients, such as those from genetically modified organism or chemical synthesis.

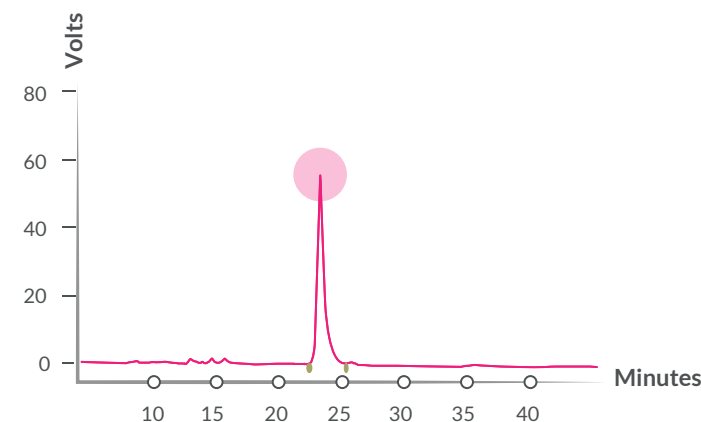
CLEAN

Gluten free, Lactose free, Toxins & pesticides free, Soy free, Animal material free: VitaMK7® is the **cleanest vitamin K2** as MK-7 available on the market.

ACHIEVING THE HIGHEST LEVEL OF PURITY

PURE

VitaMK7® is a natural vitamin K2 as MK-7 with the highest level of purity: it contains **>99% of all-trans Menaquinone7 (MK-7)**, the only active form of vitamin K2, and no trace of unknown impurities.



The purity of vitamin K2 is dual: it measured by i) The **isomeric purity**, i.e. the percentage of *all-trans* active isomer (the active form) vs. *cis* isomer (inactive); and ii) The **general purity**, i.e. the percentage of substances which are not vitamin K2 as MK-7 and result from the manufacturing process. These “general” impurities are therefore different for

natural vitamin K2 from fermentation vs. synthetic vitamin K2.

Gnosis by Lesaffre development of VitaMK7® has aimed to achieve the highest purity. VitaMK7® achieves i) **>99% of all-trans MK-7** and ii) **almost no impurities**. The main “impurity” is actually vitamin K2 as MK-6, a natural unharmed marker of the fermentation process.

RELYING ON EUROPEAN MANUFACTURING

Gnosis by Lesaffre is the **sole European producer of Vitamin K2 as MK-7**, where the entire supply chain, from the raw material to the finished product (both powder & oil, whatever the grade), is without intermediates or brokers. The production process is carried out in our own approved **cGMP plant** in compliance with the strictest quality rules, ISO and HACCP quality systems.

Moreover, we implemented a thorough Quality Management System which enables complete transparency and we offer our customers and partners the possibility to visit the 133.000 m² plant and control every step of the vitaMK7® manufacturing process.

Recently the plant was equipped with a new 120 m³ fermentation line entirely dedicated to the production of vitaMK7®.



TRUSTWORTHY

At Gnosis by Lesaffre, our relationships with customers are anchored by **transparency, accessibility and confidentiality**.

This is the reason why we offer them the opportunity to control every step of the manufacturing process of VitaMK7®.