

Quantification of Vitamin K₂ in foods using LLE and LC-FLD

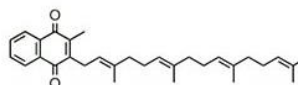
Vitamin K refers to a group of structurally similar, fat-soluble vitamins the human body needs for complete synthesis of certain proteins that are required for blood coagulation, and also certain proteins that the body uses to manipulate binding of calcium in bone and other tissues.

Vitamin K₂, the main storage form in animals, has several subtypes, which differ in chain length. These vitamin K₂ homologues are called menaquinones.

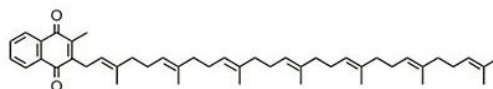
Average diets are usually not lacking in vitamin K, and primary deficiency is rare in healthy adults.. Osteoporosis and coronary heart disease are however strongly associated with lower levels of K₂ (menaquinone).

Vitas AM-312 quantifies vitamin K₂ in different food using LLE, on-line electro chemical reduction, and LC-FLD.

MK-4



MK-7

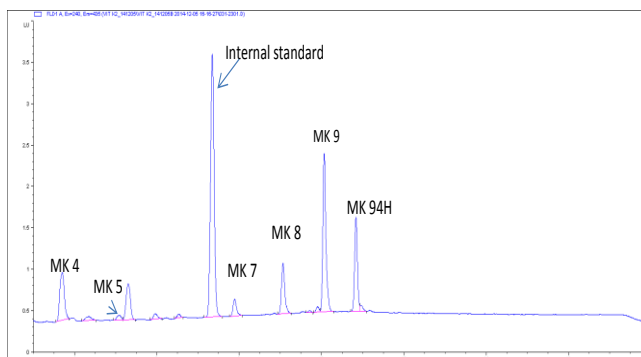


Vitamin K₂ structures. MK-4 and MK-7 are both subtypes of K₂.

Method details:

- Technique: LLE and LC-FLD
- Sample Matrix: Food
- Sample amount: 10 g
- Range: 0.2 - 140 µg K₂/100g
- Detection Limit: 0.08 µg K₂/100g
- Quantification limit: 0.2 µg K₂/100g
- Intra-day precision: 3-15 %
- Inter-day precision: 5-20%
- Shipping temp: Ambient

Chromatogram of menaquinone in cheese



Vitas is a Norwegian GMP certified chemical analysis contract lab, with 20 years experience in providing a high quality, custom chromatographic analytical service based on cutting-edge knowledge and technology.