

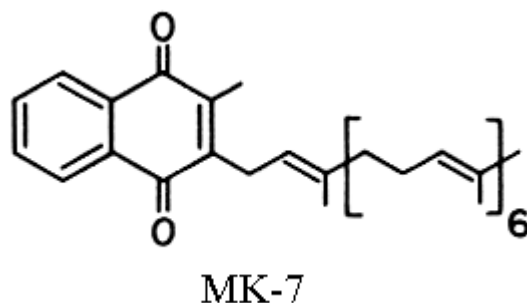
# Quantitative determination of MK-7 in human serum by LC-MS/MS

Vitamin K includes two natural vitamins: vitamin K1 and vitamin K2.

Vitamin K2, the main storage form in animals, has several subtypes, which differ in isoprenoid chain length. These vitamin K2 homologues are called menaquinones. MK-7 are characterized by 7 isoprenoid units in their side chains (see structure).

MK-7 consumption has been shown to reduce the risk of bone fractures and cardiovascular disorders that are crucial health issues worldwide.

Vitas AM-017 quantifies MK-7 in serum by protein precipitation sample preparation and LC-MS/MS analysis.

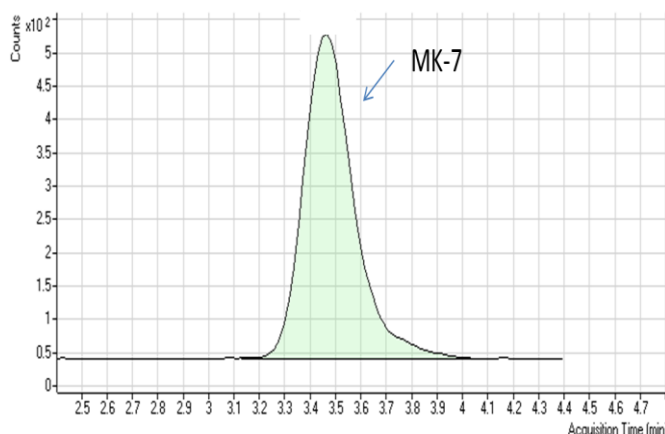


**Menaquinone-7**

## Method details:

- |                         |              |
|-------------------------|--------------|
| • Technique:            | LC-MS/MS     |
| • Sample Matrix:        | Human serum  |
| • Sample amount:        | 500 µl       |
| • Range:                | 0.2-40 ng/ml |
| • Detection Limit:      | 0.1 ng/ml    |
| • Quantification limit: | 0.2 ng/ml    |
| • Intra-day precision:  | 4-10%        |
| • Inter-day precision:  | 6-12%        |
| • Shipping temp:        | Dry ice      |

*Chromatogram of menaquinone-7*



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.