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

Vitamin K includes two natural vitamers: 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.

**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

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.