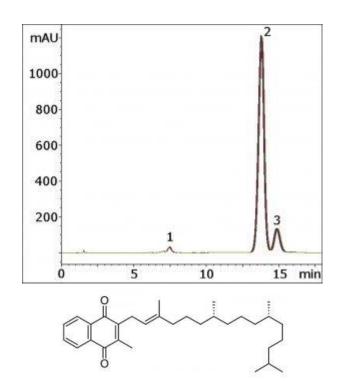


# Vitamin K Isomers Analyzed by HPLC - AppNote

# **Phytonadione Separation by Shape Selectivity**

In this Method, we separate the two E and Z isomers of Phytonadione on the basis of shape selectivity. The below chromatogram is a five injection overlay with a resolution value of 1.5.



#### Peaks:

- 1. Impurity
- 2. Phytonadione (E isomer)
- 3. Phytonadione (Z isomer)

# **Method Conditions**

Column: Cogent UDC-Cholesterol™, 4µm, 100Å

**Catalog No.**: <u>69069-15P</u> **Dimensions:** 4.6 x 150mm

Mobile Phase:

A: 50% DI Water / 50% MeOH / 0.1% Formic Acid B: 97% Acetonitrile / 3% DI Water / 0.1% Formic Acid

## **Gradient:**

Time (minutes)	%B
0	80
15	92
16	80

Temperature: 12°C

Post time: 2 minutes

Flow rate: 1.5mL / minute Detection: UV @ 254nm Sample Preparation:

Stock Solution: 10µL / mL Phytonadione in Acetonitrile diluent. (The solution was vortexed for 10

minutes.)

Working Solution: Stock solution was diluted 1:10 with Acetonitrile.

to: 1.0 minutes

Note: Phytonadione (a.k.a. Phylloquinone, Vitamin K1) is a lipophilic vitamin that can be obtained in the diet from leafy green vegetables. It plays an essential role in blood clotting by acting as a cofactor for formation of coagulation factors II, VII, IX, and X. The letter designation for Vitamin K was based on the first letter of "Koagulationsvitamin" (coagulation vitamin), which is from the German journal that first published its identification by Danish biochemist Henrik Dam.



## **Attachment**

No 152 Vitamin K Isomers Analyzed by HPLC pdf 0.8 Mb Download File

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