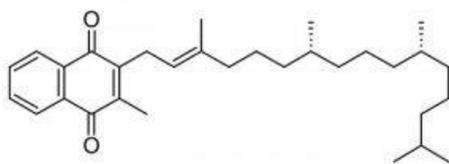
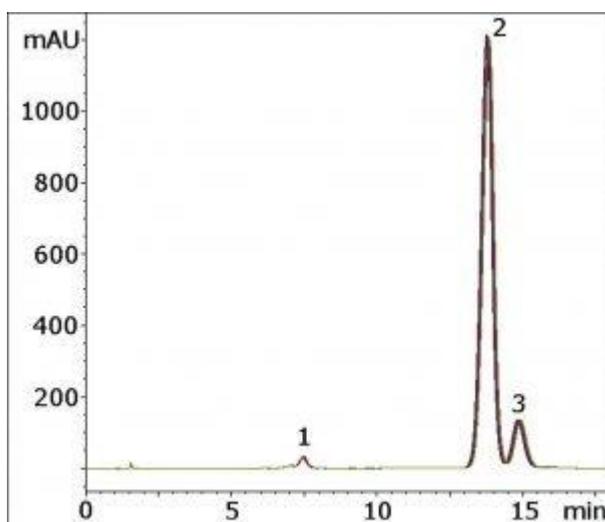


Phytonadione and Phytonadione, Vitamin K Isomers Analyzed by HPLC - AppNote

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™, 4 μm, 100 Å

Catalog No. : [69069-15P](#)

Dimensions: 4.6 x 150 mm

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: 1.5 mL / minute

Detection: UV @ 254 nm

Sample Preparation:

- *Stock Solution: 10 µL / mL Phytonadione in Acetonitrile diluent. (The solution was vortexed for 10 minutes.)*
- *Working Solution: Stock solution was diluted 1:10 with Acetonitrile.*

t_o : 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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