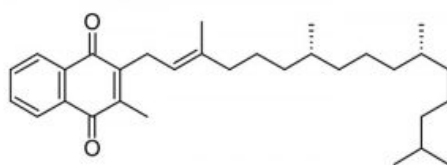
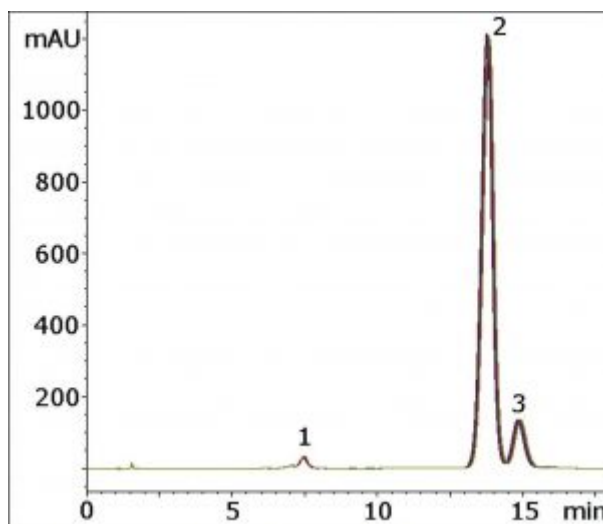


## Vitamin K Isomers Analyzed by HPLC - AppNote

### 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.:** 69069-15P

**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: 10 $\mu$ L / mL Phytonadione in Acetonitrile diluent. (The solution was vortexed for 10 minutes.)*

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

**t<sub>0</sub>:** 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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