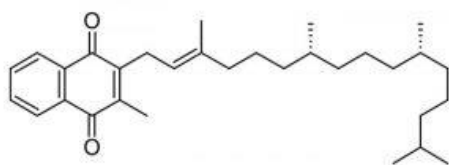
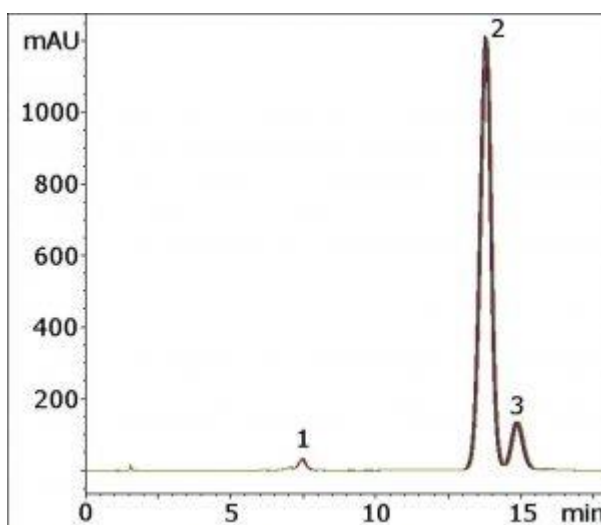


## Phytonadione and Phytonadione, Vitamin K Isomers Analyzed by HPLC - AppNote

### 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™, 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: 10µL / 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

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**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.

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**Attachment No 152 Vitamin K Isomers Analyzed by HPLC pdf** 0.8 Mb [Download File](#)

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