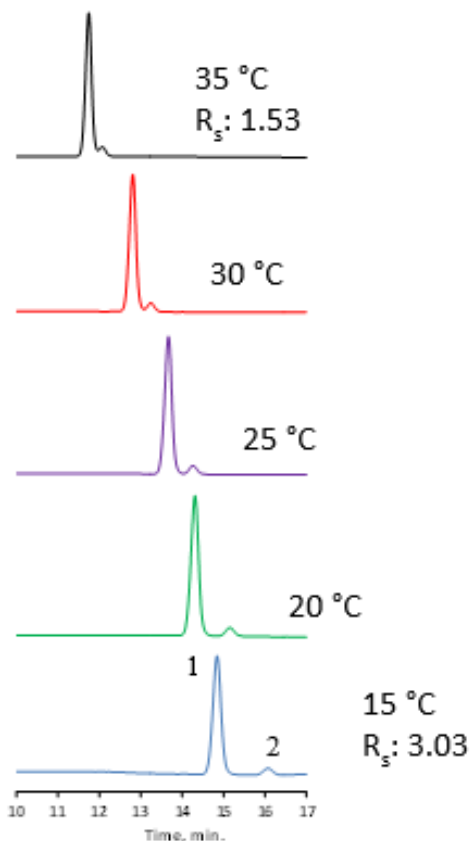




U/HPLC Analysis of Vitamin K1 on Ascentis® Express C30



Peak Number	Compound	Concentration mg/mL
1	2,3-trans-phyloquinone (K1)	1
2	cis-phyloquinone (K1)	1

Conditions:

- column:** Ascentis® Express C30, 15 cm x 4.6 mm I.D., 2.7 µm
- mobile phase:** [A] Water; [B] Methanol; Isocratic (5:95 A:B)
- flow rate:** 1.5 mL/min
- column temp.:** As indicated
- detector:** 280 nm, PDA
- injection:** 1 µL
- sample:** Vitamin K1 Compounds, 1 mg/mL, methanol

Description:

Vitamin K is a fat soluble vitamin that is found primarily in leafy green vegetables. It is necessary for the synthesis of certain proteins in the body that are involved in blood clotting and the binding of calcium. Gut bacteria can convert vitamin K1 into vitamin K2 along with its many homologues. The synthetic vitamin K3 is no longer used for vitamin K deficiency due to its potential toxicity. The Ascentis® Express C30 is ideal for vitamin K separations due to its increased hydrophobicity compared to phases with shorter alkyl chains. This application shows how as the retention increases with decreasing temperature, the resolution between the two isomers increases as well.

Materials:

Product Part Number	Description
577136-U	Ascentis® Express C30, 15 cm x 4.6 mm I.D., 2.7 µm
270733	Water
34860	Methanol
V3501	Vitamin K1



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