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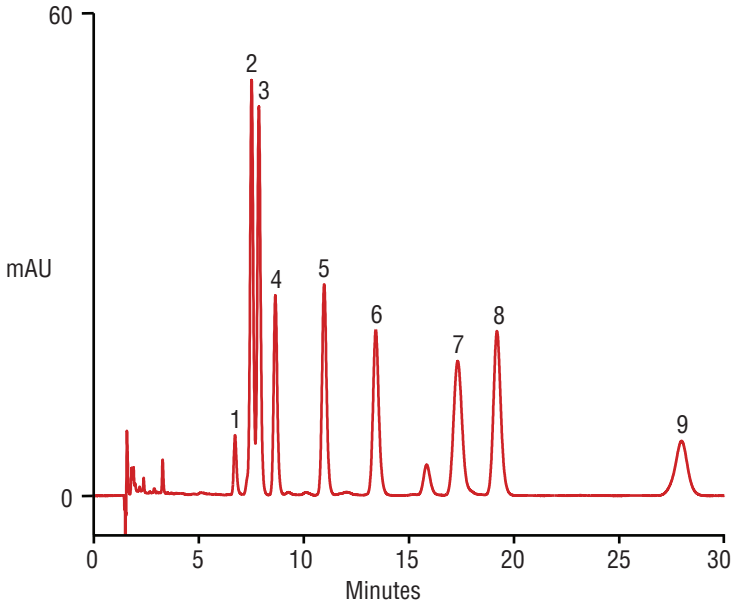
Fat-Soluble Vitamin Separation Using a Thermo Scientific™ Acclaim™ Phenyl-1 Column



Column:	Thermo Scientific™ Acclaim™ Phenyl-1, 3 µm
Dimensions:	3.0 × 150 mm
LC System:	Thermo Scientific™ Dionex™ UltiMate™ 3000 RSLC
Mobile Phase:	Methanol:water 90:10 (v:v)
Flow Rate:	0.50 mL/min
Temperature:	30 °C
Inj. Volume:	5 µL
Detection:	Diode array; UV at 220 nm
Peaks:	

1. trans-Retinol acetate 100 µg/mL
2. Vitamin D_3
3. Vitamin D_2
4. δ-Tocopherol
5. γ-Tocopherol
6. α-Tocopherol
7. Vitamin E acetate
8. Vitamin K_2
9. Vitamin K_1

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Fat-soluble vitamins are a diverse group of micronutrients that often come in multiple forms. They are used as ingredients in fortified foods and dietary supplements. Because of the complexity and variety of fat-soluble vitamins and the sample matrices they occur in, it is beneficial to have generic methods that can separate different fat-soluble vitamins within a single analysis. The Acclaim Phenyl-1 column is a specially designed reversed-phase column with high aromatic selectivity, high hydrophobic retention, and unique and complementary selectivity. In this example, the Acclaim Phenyl-1 column is used in a classic reversed-phase application. This stationary phase offers a different selectivity compared to other reversed-phase HPLC columns.

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