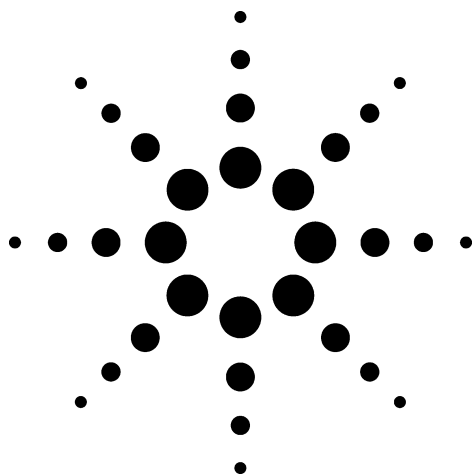
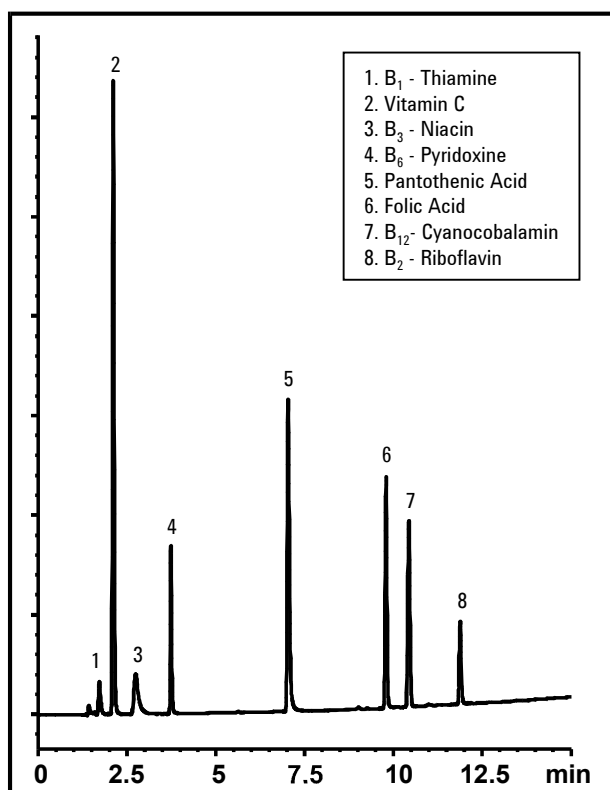




Separation of Water-Soluble Vitamins Using Reversed-Phase Chromatography

Application
Food Analysis
Robert Ricker

The analysis and quantitation of water-soluble vitamins has recently become an area of interest in the pharmaceutical industry. An alternative to routine isocratic separation, the use of a reversed-phase gradient (without ion pairing), allows analysis of an 8-component sample containing B vitamins, pantothenic acid, folic acid, and vitamin C. A ZORBAX SB-C8 column was used for the analysis.



Conditions:
ZORBAX SB-C8 (4.6 x 150 mm) (Agilent P/N: 883975-906)
Mobile Phase: A=50mM Sodium Phosphate, pH 2.5:MeOH (90:10)
B=50mM Sodium Phosphate, pH 2.5:MeOH (10:90); Gradient 0-70% B/18 min.
Injection: 10 μ L, 1 mL/min, Ambient, Detect. UV(245 nm)

Highlights

- High-speed gradient analysis of 8 water-soluble vitamins is achieved using a short (150 mm) ZORBAX SB-C8 column and a low-pH mobile phase.
- Gradient reversed-phase separations produce good peak shape for vitamin B₁₂ and pantothenic acid in addition to typical water-soluble vitamins.
- StableBond packings offer reproducibility and stability at low pH.



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