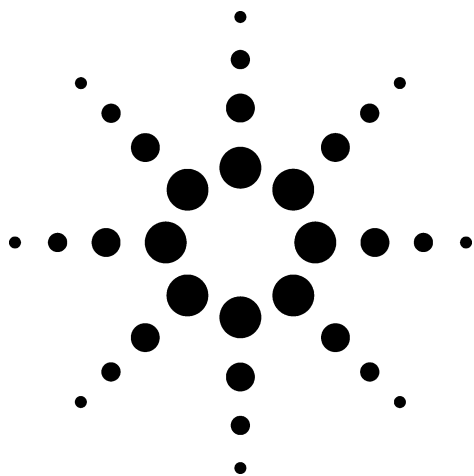




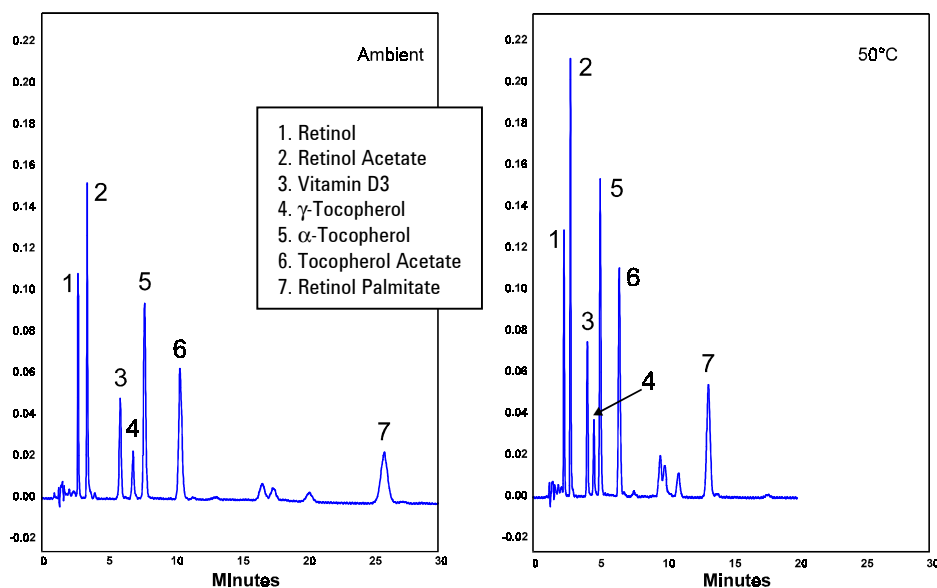
Fat-Soluble Vitamins on ZORBAX XDB-C8

Application
Food Analysis
Robert Ricker

The fat-soluble vitamins are comprised of vitamins A, D, E and K. Margarine, milk products, breakfast cereals and infant formulas are fortified with vitamins A, D and E; Vitamin K is fortified in infant formulas, only. Assays are needed to conform with nutrient-labeling regulations and to study changes in vitamin content due to storage, packaging, and processing. Normal-phase chromatography has been the chromatographic mode of choice. This application demonstrates a reversed-phase separation using high- organic concentration (>90% methanol) on a ZORBAX XDB-C8 column. By using reversed-phase chromatography for water-soluble and fat-soluble vitamins, labs requiring both assays can now minimize changeover time. The extra-dense bonding and double endcapping of ZORBAX Eclipse packings (e.g., XDB- C8) shield ionized silanols that may interact with analytes during high-organic, reversed-phase separations.

Highlights

- *Methods for normal-phase chromatography of fat-soluble vitamins can be replaced by high-organic, reversed-phase separation.*
- *Operation at high temperature results in reduced elution times, peak widths, and run-times.*



Conditions:
ZORBAX XDB-C8 (4.6 x 150mm) (Agilent P/N: 993967-906)
Mobile Phase: (5:95) water : MeOH
Injection 5 μ L, 1 mL/min, Detect. UV (280 nm)



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