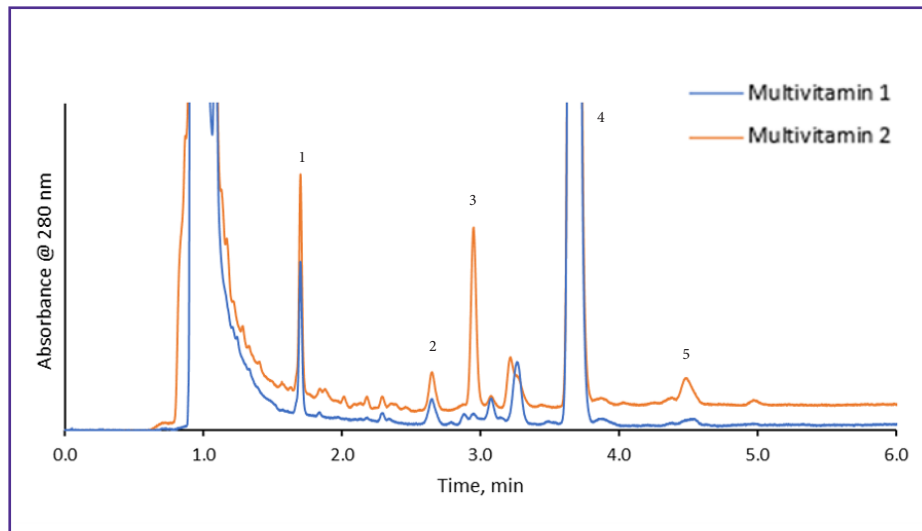




Separation of Fat Soluble Vitamins Found in Multivitamins

254-V



PEAK IDENTITIES

1. Retinyl acetate (A)
2. Cholecalciferol (D3)
3. Alpha tocopherol (E)
4. DL-alpha tocopherol acetate (E)
5. 2,3-trans-phyloquinone (K)

TEST CONDITIONS:

Column: HALO 160 Å C30, 2.7 μm , 4.6 x 150 mm

Part Number: 92114-730

Isocratic: Methanol

Flow Rate: 1.5 mL/min

Initial Back Pressure: 262 bar

Temperature: 30 °C

Detection: UV 280 nm, PDA

Injection Volume: 2.0 μL

Sample Solvent: Methanol

Data Rate: 100 Hz

LC System: Shimadzu Nexera X2

Fat soluble vitamins are stored in the liver and fatty tissue. These vitamins are essential to good health and contribute to several physiological functions, including bone growth, immune system regulation, cell division, and blood clotting. HALO® C30 enables a fast, efficient separation of fat soluble vitamins in two different multivitamin tablets. The column is capable of identifying differences between the two tablets, which at first glance may seem similar due to the solvent front and the high abundance of DL-alpha tocopherol acetate (E). Upon closer inspection, differences in the concentrations of the relatively minor peaks, particularly for alpha-tocopherol are clearly evident. Such capabilities are vital to confirm the food label content information. Also, in some extreme cases, it could be crucial to verify the identity of a multi-vitamin e.g. fraudulent re-labelling of cheaper tablets as higher priced products.

