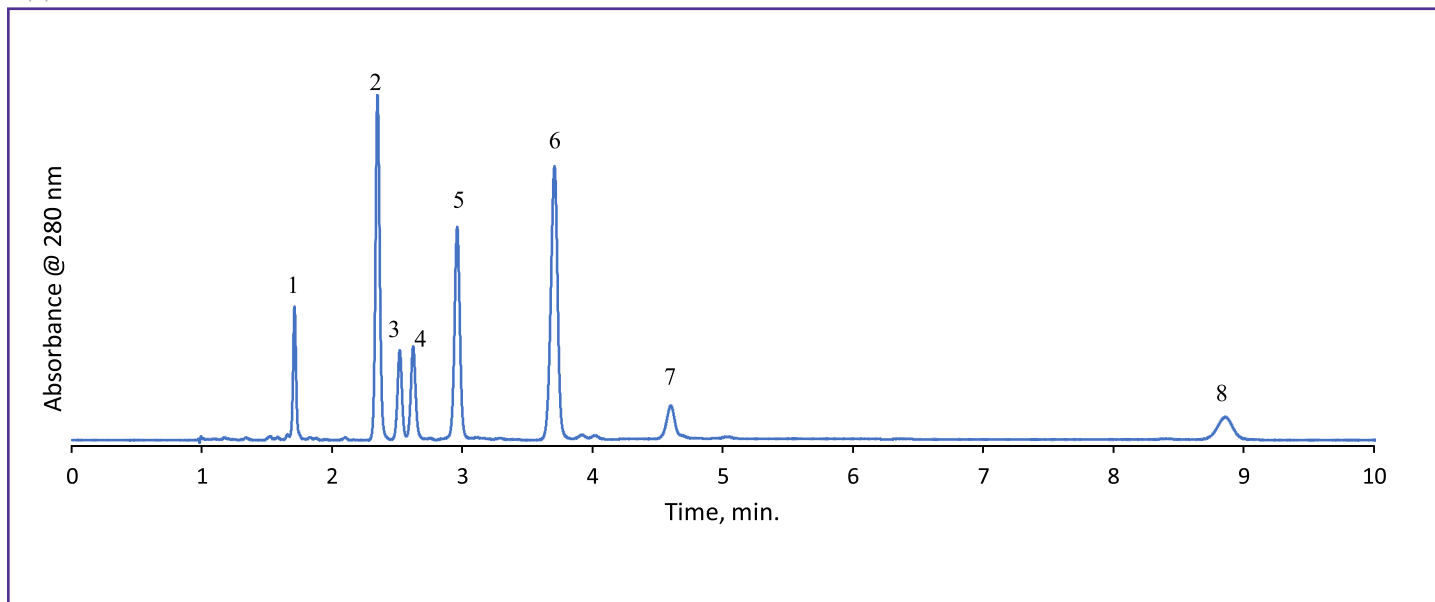




Separation of Fat Soluble Vitamins on HALO[®] C30

Application Note 182-V



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. Vitamin E acts as an antioxidant. HALO[®] C30 enables a fast, efficient separation of a typical fat soluble vitamin panel in less than 9 minutes, while maintaining baseline resolution between vitamins D2 and D3.

PEAK IDENTITIES:

1. Retinyl acetate (A)
2. Delta tocopherol (E)
3. Ergocalciferol (D2)
4. Cholecalciferol (D3)
5. Alpha tocopherol (E)
6. DL-alpha-tocopherol acetate (E)
7. 2,3-trans-phyllloquinone (K)
8. Retinyl palmitate (A)

CONCENTRATION:

- 0.15 mg/mL
- 0.08 mg/mL
- 0.08 mg/mL
- 0.08 mg/mL
- 0.08 mg/mL
- 0.08 mg/mL
- 0.31 mg/mL
- 0.15 mg/mL

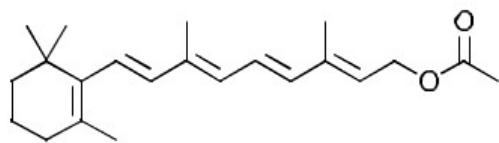
TEST CONDITIONS:

- Column:** HALO 160 Å C30, 2.7 μm, 4.6 x 150 mm
- Part Number:** 92114-730
- Isocratic:** 100% methanol
- Flow Rate:** 1.5 mL/min
- Pressure:** 262 bar
- Temperature:** 30 °C
- Detection:** UV 280 nm, PDA
- Injection Volume:** 2.0 μL
- Sample Solvent:** Methanol
- Response Time:** 0.025 sec
- Data Rate:** 40 Hz
- Flow Cell:** 1.0 μL
- LC System:** Shimadzu Nexera X2

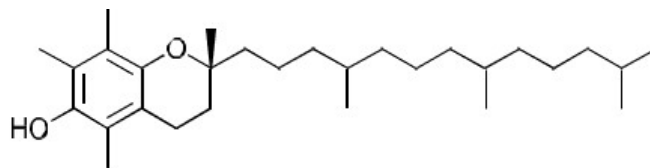




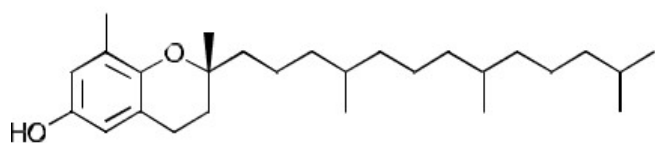
STRUCTURES:



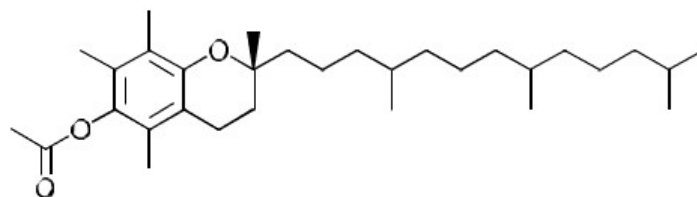
Retinyl acetate (A)



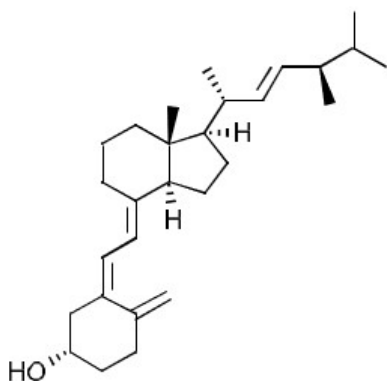
Alpha tocopherol (E)



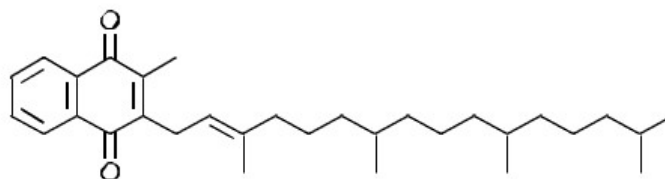
Delta tocopherol (E)



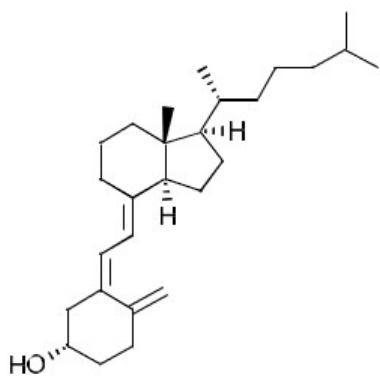
DL-alpha-tocopherol acetate (E)



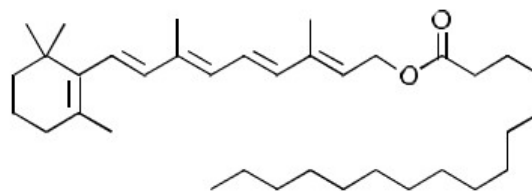
Ergocalciferol (D2)



2,3-trans-phyloquinone (K)



Cholecalciferol (D3)



Retinyl palmitate (A)

