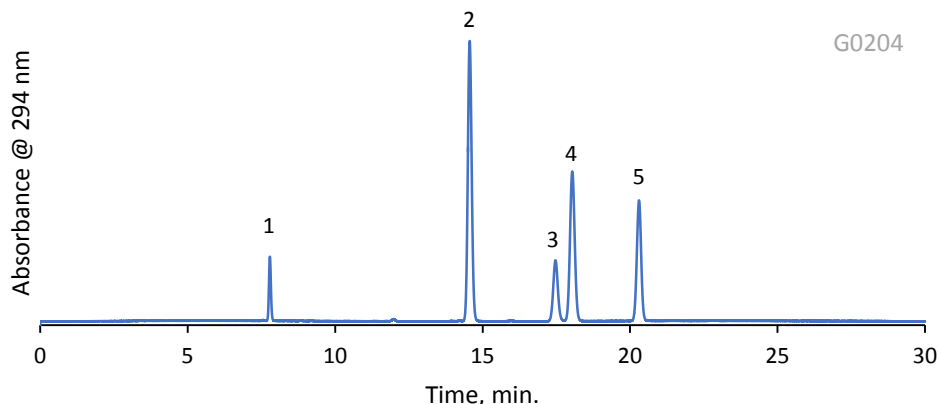


Application Note: 210-V

Analysis of Vitamin A and Vitamin E Isomers using GB Method



PEAK IDENTITIES:

1. Retinyl Acetate
2. δ -tocopherol
3. γ -tocopherol
4. β -tocopherol
5. α -tocopherol

TEST CONDITIONS:

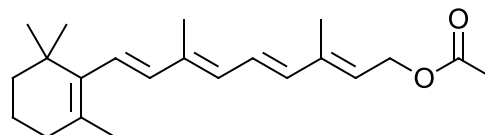
Column: HALO 160 Å C30, 2.7 μ m, 4.6 x 250mm
Part Number: 92114-930

Mobile Phase A: Water
Mobile Phase B: Methanol

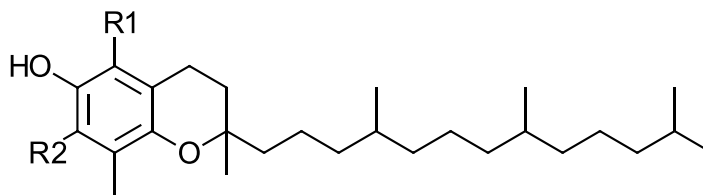
Gradient: Time	%B
0.0	96
13.0	96
20.0	100
24.0	100
24.5	96
30.0	96

Flow Rate: 0.8 mL/min
Initial Pressure: 237 bar
Temperature: 20°C
Detection: 294 nm, PDA
Injection Volume: 10 μ L
Sample Solvent: Methanol/ Ethanol
Data Rate: 14 Hz
Response Time: 0.12 sec.
Flow Cell: 5 μ L semi-micro
LC System: Agilent 1100

STRUCTURES



Retinyl acetate



Tocopherol	R1	R2
Alpha (α)	CH ₃	CH ₃
Beta (β)	CH ₃	H
Gamma (γ)	H	CH ₃
Delta (δ)	H	H

The 2.7 μ m HALO® C30 is an ideal choice for the separation of vitamin A and the isomers of vitamin E using the official GB method. The shape selectivity of C30 allows for baseline resolution of gamma and beta tocopherol, which typically coelute on other bonded phases.