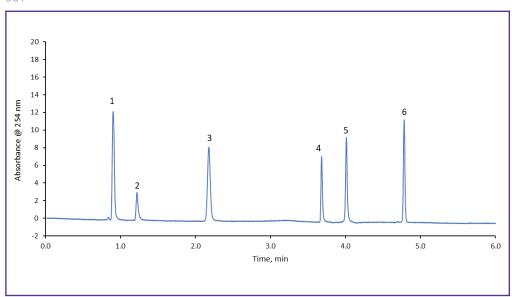


VITAMINS



Water-Soluble Vitamins Separated on HALO® Penta-HILIC

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PEAK IDENTITIES:

- 1. Nicotinamide (B3)
- 2. Pyridoxine (B6)
- 3. Riboflavin (B2)
- 4. Thiamine (B1)
- 5. Ascorbic Acid (C)
- 6. Cyanocobalamin (B12)

TEST CONDITIONS:

Column: HALO 90 Å Penta-HILIC, 2.7 µm, 2.1 x 150 mm

Part Number: 92812-705

Mobile Phase A: 10 mM ammonium acetate + 0.05% acetic acid in

90/10 water/acetonitrile

Mobile Phase B: 10 mM ammonium acetate + 0.05% acetic acid in

10/90 water/acetonitrile

Gradient: Time %B
0.00 100
1.00 100
6.00 50
7.00 100
12.00 100

Flow Rate: 0.5 mL/min Pressure: 202 bar Temperature: 40 °C Detection: UV 254 nm, PDA

Sample Solvent: 50/50 water/acetonitrile

Data Rate: 40 Hz Response Time: 0.05 sec

Injection Volume: .5 µL

Flow Cell: 1 µL

LC System: Shimadzu Nexera X2

An alternative method to reversed-phase for analysis of water soluble vitamins is demonstrated on a HALO° Penta-HILIC column using HILIC conditions. All of the vitamins are baseline resolved and the separation is complete in less than 5 minutes.

While there can be resistance and challenges to using HILIC mode, this separation shows how useful it can be in terms of retention and resolution.



