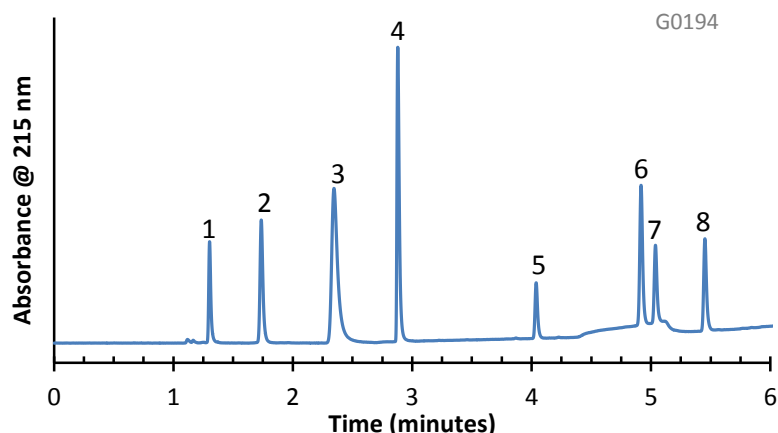


Separation of Water-Soluble Vitamins on HALO AQ-C18



PEAK IDENTITIES:

1. Thiamine (B1)
2. Ascorbic acid (C)
3. Nicotinamide (B3)
4. Pyridoxine (B6)
5. Pantothenic acid (B5)
6. Cyanocobalamin (B12)
7. Folic acid (B9)
8. Riboflavin (B2)

TEST CONDITIONS:

Column: HALO 90 Å AQ-C18, 2.7 µm, 4.6 x 150 mm

Part Number: 92814-722

Mobile Phase: A/B

A= 0.025 M, potassium phosphate in water, pH=2.5

B= Methanol

| Gradient: Time (min.) | %B |
|-----------------------|----|
| 0.0 | 0 |
| 1.0 | 0 |
| 6.0 | 70 |
| 10.0 | 70 |

Flow Rate: 1.2 mL/min.

Initial pressure: 243 bar

Temperature: 30°C

Injection Volume: 2.0 µL

Sample Solvent: water

Detection: 215 nm, VWD

Response Time: 0.02 sec.

Data rate: 25 Hz

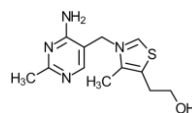
Flow Cell: 2.5 µL semi-micro

LC System: Shimadzu Prominence UFLC XR

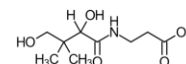
ECV: ~14 µL

HALO AQ-C18 columns can be used with totally or mostly aqueous mobile phases. In this application, eight water-soluble vitamins are well-separated using this phase in under six minutes using a gradient from 0–70% methanol, with a 1-minute initial hold.

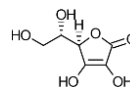
STRUCTURES:



Thiamine

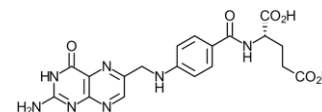


Pantothenic acid

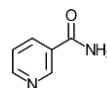


Ascorbic acid

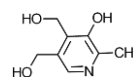
Cyanocobalamin
(structure not included to space constraints)



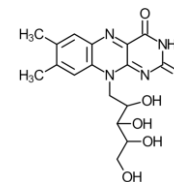
Folic Acid



Nicotinamide



Pyridoxine



Riboflavin