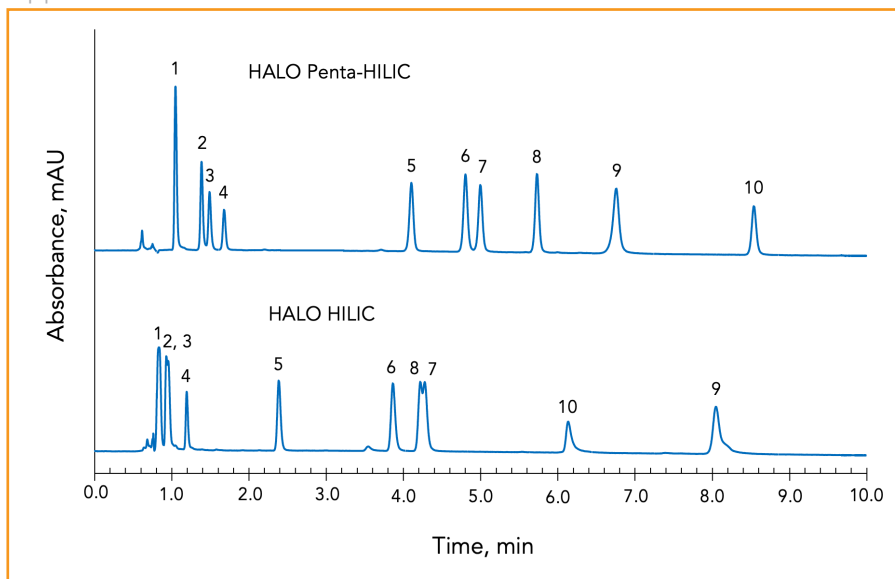




Separation of Cephalosporins on HALO® Penta-HILIC and HALO® HILIC

Application Note 68-AB



PEAK IDENTITIES:

1. Cephalothin
2. Cefoxitin
3. Cefotaxime
4. Cefazolin
5. Cefaclor
6. Cephalexin
7. Cephadrine
8. Cefadroxil
9. Ceftazidime
10. Cephalosporin C

The class of antibiotics called cephalosporins are β -lactam drugs that are used to treat streptococcus and staphylococcus infections. Analyzing these drugs using the HALO® Penta-HILIC phase offers an alternate selectivity to reversed-phase separations.

TEST CONDITIONS:

Columns:

- 1) HALO 90 Å Penta-HILIC, 2.7 μm , 2.1 x 150 mm
Part Number: 92812-705
- 2) HALO 90 Å HILIC, 2.7 μm , 2.1 x 150 mm
Part Number: 92812-701

Mobile Phase:

- A: 95/5 ACN/H₂O with 5 mM NH₄ formate, pH 3.0
B: 50/50 ACN/H₂O with 5 mM NH₄ formate, pH 3.0 (adj.)

Gradient: 85-65% B in 10 min (Penta-HILIC)
85-70% B in 10 min (HILIC)

Flow Rate: 0.5 mL/min

Pressure: 195 bar (Penta-HILIC)
163 bar (HILIC)

Temperature: 30 °C

Detection: UV 254 nm, VWD

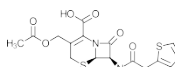
Injection Volume: 0.5 μL

Sample Solvent: 50/50 ACN/water

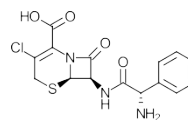
Flow Cell: 5.0 μL semi-micro

LC System: Agilent 1100

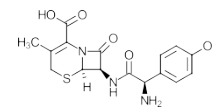
STRUCTURES:



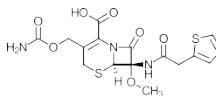
Cephalothin



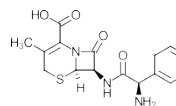
Cefaclor



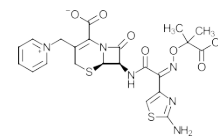
Cefadroxil



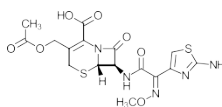
Cefoxitin



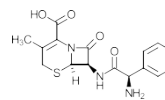
Cephalexin



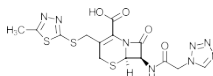
Ceftazidime



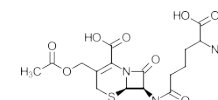
Cefotaxime



Cephadrine



Cefazolin



Cephalosporin C

