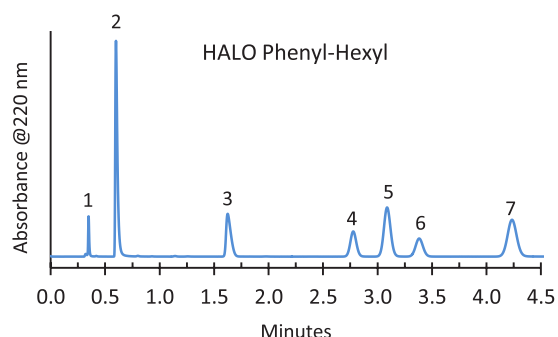




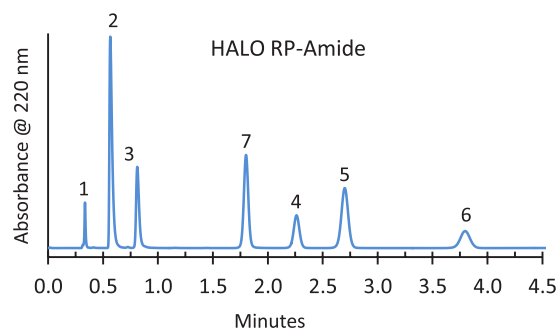
Separation of Food Additives on HALO® Phenyl-Hexyl and RP-Amide Phases

Application Note 95-P



PEAK IDENTITIES:

- | | |
|------------------|-----------------------|
| 1. Ascorbic acid | 5. Benzoic acid |
| 2. Saccharin | 6. Methyl paraben |
| 3. Aspartame | 7. Dehydroacetic acid |
| 4. Sorbic acid | |



These compounds are often added to foods to sweeten or preserve them. They can be rapidly analyzed using HALO® Phenyl-Hexyl or RP-Amide phases. Note the difference in retention and selectivity of the two phases when run under the same conditions. This allows for flexibility in method development and optimization of the separation.

TEST CONDITIONS:

Columns:

- 1) HALO 90 Å Phenyl-Hexyl, 2.7 µm, 4.6 x 50 mm
Part Number: 92814-406
- 2) HALO 90 Å RP-Amide, 2.7 µm, 4.6 x 50 mm
Part Number: 92814-407

Mobile Phase: 70/30 - A/B

- A: 0.025 M phosphate buffer, pH 2.5
B: Methanol

Flow Rate: 1.5 mL/min

Pressure: ~220 bar

Temperature: 40 °C

Detection: UV 220 nm, VWD

Injection Volume: 2.0 µL

Sample Solvent: 50/50 water/methanol

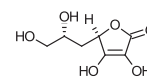
Response Time: 0.02 sec

Flow Cell: 2.5 µL semi-micro

LC System: Shimadzu Prominence UFLC XR

Extra Column Volume: ~14 µL

STRUCTURES:



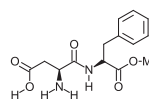
Ascorbic acid



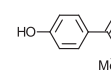
Saccharin



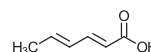
Benzoic acid



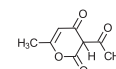
Aspartame



Methyl paraben



Sorbic acid



Dehydroacetic acid

