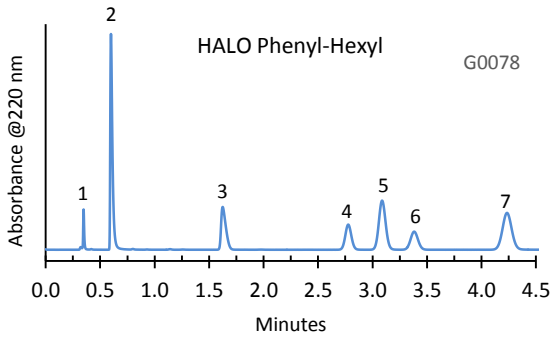
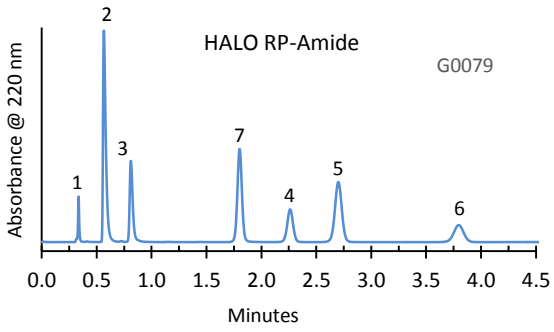
Application Note: 095-P

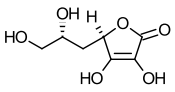
Separation of Food Additives on HALO Phenyl-Hexyl and RP-Amide Phases



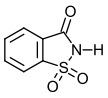


TEST CONDITIONS:
Column: 4.6 x 50 mm, Phenyl-Hexyl, HALO RP-Amide, 2.7 µm
Part Numbers: 92814-406,-407, respectively
Mobile Phase: 70/30—A/B
A= 0.025 M phosphate buffer, pH=2.5
B= Methanol
Flow Rate: 1.5 mL/min.
Pressure: approximately 220 Bar
Temperature: 40 °C
Detection: UV 220 nm, VWD
Injection Volume: 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: ~14µL

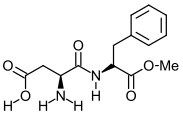
STRUCTURES:



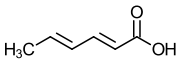
Ascorbic acid



Saccharin

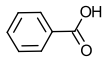


Aspartame

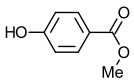


Sorbic acid

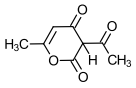
PEAK IDENTITIES:
1. Ascorbic acid
2. Saccharin
3. Aspartame
4. Sorbic acid
5. Benzoic acid
6. Methyl paraben
7. Dehydroacetic acid



Benzoic acid



Methyl paraben



Dehydroacetic 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.