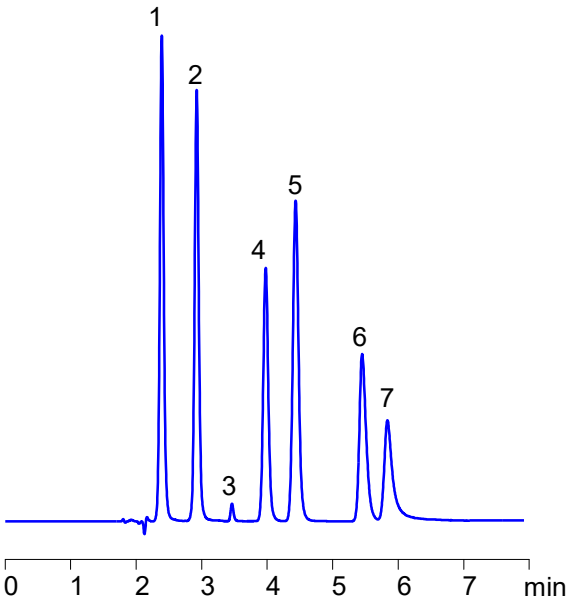
Analysis of Hydrophobic Drugs and Acidic Counterions in Mixed-Mode Chromatography



1. Doxylamine
2. Pyrilamine
3. Succinic acid
4. Chlorpheniramine
5. Brompheniramine
6. Maleic acid
7. Dextromethorphan

Column: Heritage MA
Dimensions: 4.6x150 mm, 3 um, 100A
Mobile phase: ACN/Water/ammonium Formate pH 3
Flow rate: 1 ml/min
Detection: 235 nm

Application Notes

In mixed-mode chromatography polar and hydrophobic, ionic and neutral compounds can be analyzed with various mobile phases. The choice of the mobile phase will depend on properties of your compounds as well as detection technique. Since most of the drugs are available as different salts, mixed-mode appeared to be a perfect choice for analysis of drugs and corresponding counterions. Heritage MA column can be used for the analysis of hydrophobic basic drugs and acidic counterions. Hydrophobic drugs are retained by combination of reversed-phase and cation-exclusion and acidic counterions are retained by RP and anion-exchange mechanisms. When you explore different mechanisms of interactions you can often replace gradient run with a shorter isocratic run., like in the example above. The retention time for compounds of a different nature can be controlled independently by changing the amount of ACN, buffer pH, buffer concentration and nature of the buffer. No ion-pairing reagent is needed with mixed-mode columns, as an ion-pairing reagent is attached to the surface of the silica gel. Learn more on how you can analyze drugs and drug formulations using mixed-mode chromatography at www.helixchrom.com