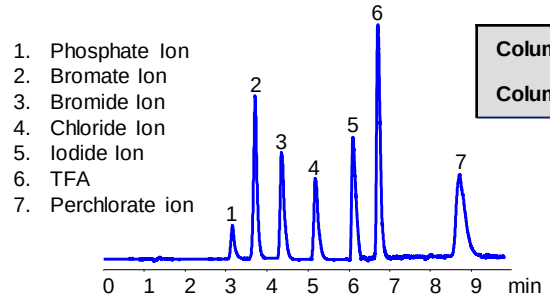
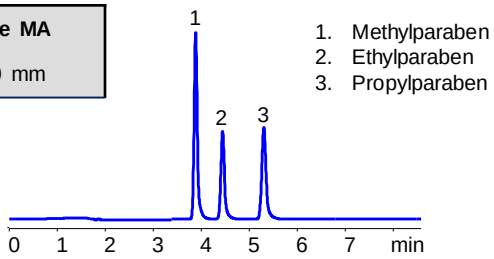
Exploring Heritage MA Mixed-Mode HPLC Column in Various Modes of Separation



Column:	**Heritage MA**
Column size:	4.6x150 mm

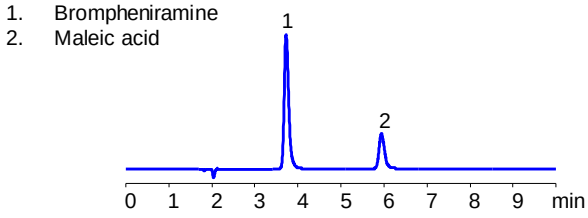
Mobile phase: 60% ACN with 60 mM AmFm pH 3
Flow: 1 ml/min
Detection: ELSD 45°C

Fig. 1 Separation of 7 Ions in Anion-Exchange Mode



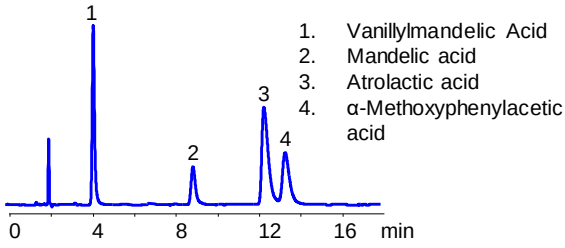
Mobile phase: 60% ACN with 10 mM AmAc pH 4
Flow: 1 ml/min
Detection: UV 255 nm

Fig. 2 Separation of Parabens in Reversed-Phase Mode



Mobile phase: 20% ACN with 120 mM AmFm pH 3
Flow: 1.0 mL/min
Detection: UV 255 nm

Fig. 3 Separation of Drug and Counter-Ion in Reversed-Phase, Anion-Exchange and Anion-Exclusion Modes



Mobile phase: 20% ACN with 100 mM AmFm pH 3
Flow: 1 mL/min
Detection: UV 255 nm

Fig. 4 Separation of Organic Acids in Reversed-Phase and Anion-Exchange Mode

Application Notes

We are continuing to demonstrate how mixed-mode columns can replace traditional columns in order to unify method development options. Why use 3-4 columns if you can explore various modes on the same column? Heritage MA is a RP/anion-exchange/cation-exclusion column. You can use it in single or multiple modes depending on the nature of your analyte.

Here are a few chromatograms to prove this approach:

Fig. 1 Separation of 7 ions in anion-exchange mode. Organic and inorganic ions can be analyzed and separated based on their acidic properties. Retention time is adjusted by buffer pH and buffer concentration.

Fig. 2 Separation of Parabens in Reversed-Phase Mode. Parabens and other hydrophobic and non-ionizable compounds can be retained and separated based on their hydrophobic properties. The retention time is adjusted by the amount of organic component of the mobile phase.

Fig. 3 Separation of Drug and Counter-Ion in Reversed-Phase, Anion-Exchange and Anion-Exclusion Modes. Drugs and their counter-ions can be retained and separated in reversed-phase, anion-exclusion and cation-exclusion modes. The retention time can be adjusted by changing the amount of organic, amount of buffer and buffer pH.

Fig. 4 Separation of Organic Acids in Reversed-Phase and Anion-Exchange Modes. The retention time is adjusted by the amount of organic, buffer concentration and buffer pH. Controlling the ionization state of the analyte and stationary phase with a proper pH andbuffer allows you to enhance mechanisms of interaction and better control your retention and resolution. Multi-mode interactions are powerful tools for separating a broad spectrum of organic and inorganic molecules.

You will save time and money by using mixed-mode columns in your research. Contact us if you have questions or want us to develop a method for you. Nobody is more effective than Helix Chromatography in method development. (www.helixchrom.com)