

## No need to use a high pH mobile phases for compounds with a high pKa – Tips & Suggestions

While some types of analyses for compounds have traditionally required a high mobile phase pH (e.g. up to 10, 11 or 12) in order to get acceptable chromatographic retention due to a high pKa, it is not necessary to use high pH to get retention.

These extreme pH conditions can be damaging to any HPLC system's pump seals, tubing, joints and detection cells. Also, at very high pH and moderate ionic strength, you can expect Column problems due to Silica Dissolution Issues.

Using Cogent™ TYPE-C™ HPLC Columns and **Aqueous Normal Phase ANP**, a high mobile phase pH may not be required. Many types of compounds can be retained readily in the typical usable HPLC pH range of 2-7. It should be noted that some methods call for high pH due to solubility of the analytes. If this is the case, you would want to stay with high pH. You want to fully ionize your compounds in ANP not neutralize them.

*A "Rule of Thumb" is to work with acids in basic mobile phase and bases in acidic mobile phases.*



Printed from the Chrom Resource Center

**MicroSolv Technology Corporation**

9158 Industrial Blvd. NE, Leland, NC 28451

tel. (732) 380-8900, fax (910) 769-9435

Email: [customers@mtc-usa.com](mailto:customers@mtc-usa.com)

Website: [www.mtc-usa.com](http://www.mtc-usa.com)

Date: 05-06-2024