

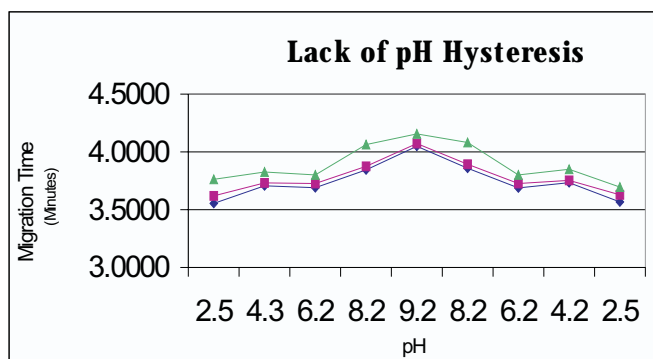
You will not see pH Hysteresis

A Very Low Coefficient of Variation

pH Hysteresis is the constant, large changes in EOF due to small changes in pH during normal CZE that you will experience. When you do CZE with bare fused silica capillaries in the acidic range, EOF is extremely slow to non-existent. At basic pHs on the same bare fused silica capillary, the EOF is very rapid. Also, a little known problem in CZE is the intra capillary hysteresis. At different points in the capillary (due to wall adsorption effects), the EOF will change. CElixir™ eliminates these effects. Due to the stability of your EOF while you use CElixir™, not only do you attain reproducible %CV but also you can use pH as a selectivity tool or as a solubility tool.

Average Migration Times of a Peptide Mixture using CElixir™

pH	Peak 1 ◆	Peak 2 ■	Peak 3 ▲
2.5	3.555	3.619	3.783
4.3	3.707	3.732	3.826
6.2	3.690	3.727	3.800
7.3	3.788	3.886	3.960
8.2	3.844	3.875	4.063
9.2	4.049	4.073	4.155
8.2	3.859	3.893	4.081
7.3	3.793	3.890	3.964
6.2	3.689	3.726	3.800
4.2	3.733	3.753	3.850
2.5	3.567	3.629	3.696



These charts show the migration times (minutes) of a peptide mixture resolving into three peaks, using CElixir™ on the same capillary while ramping up and down the pH scale. You can have fast, consistent EOF across a wide pH range when you use CElixir™.

pH is Crucial to Reliable CZE

CElixir allows you to use pH to control parameters other than EOF when you don't have to worry about Hysteresis. Now, when you are developing your method you can use any pH between 2.5 and 9.2 to control the following parameters:

- A. Solute Velocity
- B. Electrophoretic Mobility of your Samples (Ionization)
- C. Column Efficiency
- D. Peak Shape
- E. Selectivity
- F. Sample's Affinity for the Wall of the Capillary