CElixir™

A Practical Approach to CZE

Application Sheet:

BioMolecular Separations: Reliable and Easy

Powerful, low cost Tool for Bio-Analysts

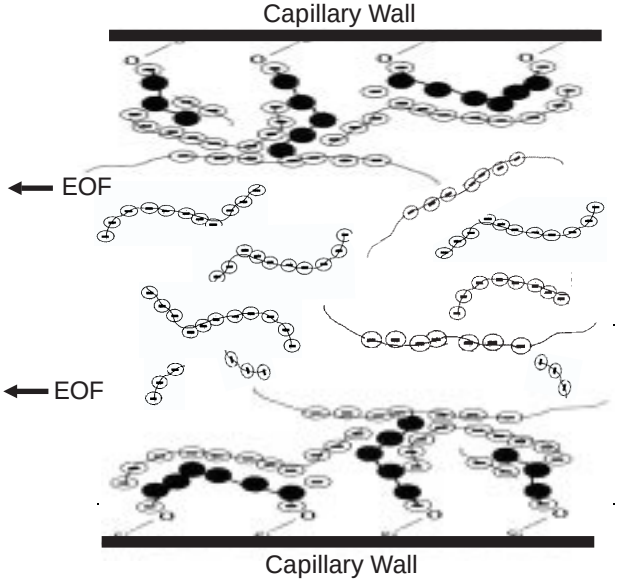
With CElixir™, you can separate many Biomolecules with CZE without the use of extremely low pH (so that the silica is not ionized), without the use of buffers with a pH above the pI of the biomolecule, without high salt concentrations and without buffer additives.

Proteins and Peptides

If you are analyzing proteins or peptides, the absence of pH Hysteresis and the reduced interaction of Biomolecules with the wall of the capillary using CElixir will allow you to select any pH between 2.0 and 9.5. This is due to the adsorption equilibria of CElixir shifting from the silanol sites of the bare fused silica to the background electrolyte of CElixir. The formulation and unique construction coats and covers the silanol sites of the capillary but also since the coating polymer is part of the “run buffer” the protein may Ion-Pair with moving polymers and adsorption is greatly reduced. Also, a rapid EOF (even in the acidic range) leaves much less time for analytes to interact with the wall.

Since your EOF will not change with pH changes you may be able to use the pH that is best for your protein's conformation and their separation. If you want to characterize proteins in their native state and want to keep it at its natural pH you can do that even in the acidic range. CElixir's EOF in the acidic pH will be very fast, reproducible and robust. Now, you can work below your protein's pKa and still have a fast, reproducible EOF.

CElixir can be adjusted to any pH you want helping you with solubility problems as well. CElixir also minimizes wall adsorption found in normal CZE. This aids in improved %CV from run to run and capillary to capillary



This pictogram shows the “Run Buffer’s” relationship to the Capillary Wall

pH controls ionization as well as the complex formation or ion pairing equilibria.

Select any pH and get a fast EOF; why not use CElixir and adjust the pH to optimize your separation. At different pHs and therefore different ionization of your proteins, CElixir will give you improved results; use pH to optimize your runs.

1 Analis Patent No. 5,611,903