Ionic Strength Changes in Capillary Electrophoresis - Tech Information

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INTERNAL ONLY - Information is not confidential but this post may be out of date.

When you change the Ionic Strength (Buffer Concentration) in your CZE method, the following changes can be expected.

Joule Heating: An increase in ionic strength (buffer concentration) will produce more heating. See the effects of change in temperature for effects.

Viscosity: An increase in ionic strength or buffer concentration will cause an increase in viscosity. See the effects of change in viscosity for effects.

Electro Osmotic Flow: High ionic strength buffers will cause a decrease in EOF.

Analyte to Wall Interaction: A higher ionic strength buffer (buffer concentration) can lessen or eliminate Protein to Wall interactions.

Migration Time: An increase in ionic strength buffers can increase your migration times.

Resolution: An increase in ionic strength buffers can increase your capillary selectivity and therefore resolution.

Electrophoretic Mobility: An increase in ionic strength (buffer concentration) can increase the electrophoretic mobility of your analytes.

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