

Application Sheet:
***Method Development:
Scouting for an Optimized Method***

CElixir has been optimized to perform best when used at the right pH for your sample matrix. It is usually not known which pH that will be but it is very easy and quick to find out. Simply follow the instructions of this application sheet and you will find the right pH and your method will be optimized.

Method Development Instructions



1. Dissolve your sample in Accelerator Solution (B) pH 2.5 or a buffer, similar in pH to the Accelerator Solution (B). Follow the instructions in the CElixir Operating and Trouble Shooting Manual for Method of Analysis and include in your runs, a neutral marker to determine the EOF along with the migration times of your peaks.
2. As per the instructions in the manual, remove the polymeric coating and re-run the same method as above but this time dissolve your sample in the next higher pH of CElixir Accelerator Solution (B). Run your method in the same or higher pH, note the EOF and migration times of your peaks.
3. Repeat the above steps with each available Accelerator Solution (B) until you operate with CElixir at pH 9.2.
4. Find two runs where you achieved your best resolution and efficiency. It is most likely that your optimized run is using CElixir at the pH somewhere between these two runs.

Follow the instructions on page 24 of the CElixir Operating and Trouble Shooting Manual to adjust the Accelerator Solution (B). Continue to bracket the pK or suspected pK until you are satisfied with the results. Ion pairing can occur when the pH of the Accelerator Solution is above your molecules pI and can give you surprising results

CElixir™ pH Adjustment
Accelerator Solution (B)

CElixir Solution (B)	To Increase pH	To Decrease pH
pH2.5	Add CElixir pH8.2	Add 1N H3PO4
pH4.3	Add 1N NaOH	Add 1N HCl
pH6.2	Add CElixir pH8.2	Add CElixir pH2.5
pH8.2	N/A	Add CElixir pH2.5
pH9.2	N/A	Add 1N H3PO4

NOTE: CElixir™ solutions should never be diluted with water, as this will adversely affect buffer performance and dilution of the essential active component.

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