

Separation of Polar Intermediates in Reversed Phase Recommendation - Tips and Suggestions

Our Bidentate C18™; and more about retaining polar compounds :

Although we have separated polar compounds on our Bidentate C18™ column and Reversed Phase TYPE-C™ columns, this strategy that retains polar compounds on the C18 is using a different method and mechanism than most Reversed Phase methods. The Bidentate C18™ columns can invoke an Aqueous Normal Phase ANP mechanism that works in conjunction with hydrophobic interaction of the ligands that will retain and separate many polar compounds but this work that we have done is with ANP methods. It is important to note that ANP methods use the same solvents as Reversed Phase methods but involves an "inverse strategy" of low A solvent (aqueous) concentration versus high B solvent (organic) concentration starting points.

We have found that a Reversed Phase methodology with our TYPE-C™ columns does not work well for *very* polar compounds unless these compounds have a good amount of hydrophobicity to it as well as polar regions of the molecule. If the compound is strictly polar, we have doubt that the compounds will be retained in an RP method but there is still much to learn about the columns. All in all, we have found our Bidentate C18™, UDC-Cholesterol™ and Bidentate C8™ to be very hydrophobic and show strong hydrophobic interaction in Reversed Phase HPLC methods.

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