Cogent silica hydride HPLC columns by order of hydrophobicity – Tips & Suggestions

The first thing to consider when selecting a column for method development is the chemical structures of the analytes in your sample and the corresponding most suitable retention mode for them.

Stationary Phases in Order of Hydrophobicity:

Bidentate C18 > UDC-Cholesterol > Bidentate C8 > Phenyl Hydride > UDA > Diol > Amide > Diamond Hydride > Silica-C

Most Hydrophobic *Most Hydrophilic*

The general order of stationary phase hydrophobicity *(and therefore retentiveness in RP)* is *left to right*
For hydrophilicity *(and therefore retentiveness in ANP)* is *right to left*.

NOTE 1: *Various factors may influence the retention; ie for the Phenyl Hydride, greater retention may be observed for aromatic and conjugated double bond compounds. Likewise, the Cogent UDA ligand becomes more polar as pH is increased.*

NOTE 2: ***Aqueous Normal Phase*** *HPLC ANP is typically used for polar compounds however, some compounds may be amenable to both methods. Acids are the most common of the compounds that can be done in RP and ANP. Here the change occurs at a reasonable pH so at low pH they are done by RP and at higher pH values (6–7) they can be done by ANP.*

NOTE 3: *For Bases this approach is not used because to do them in RP you have to have high pH (at least 8 – 9). Therefore for bases, only ANP methods are generally recommended.*

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