

# Inertsil HILIC

- Unique Selectivity and Elution Order for Polar Compounds
- Polar Compounds show Increased Retention with Increased Organic Content
- Greatly reduced ion suppression in LCMS
- Vast database of chromatographic applications available to assist in method development
- Very low operating back pressure

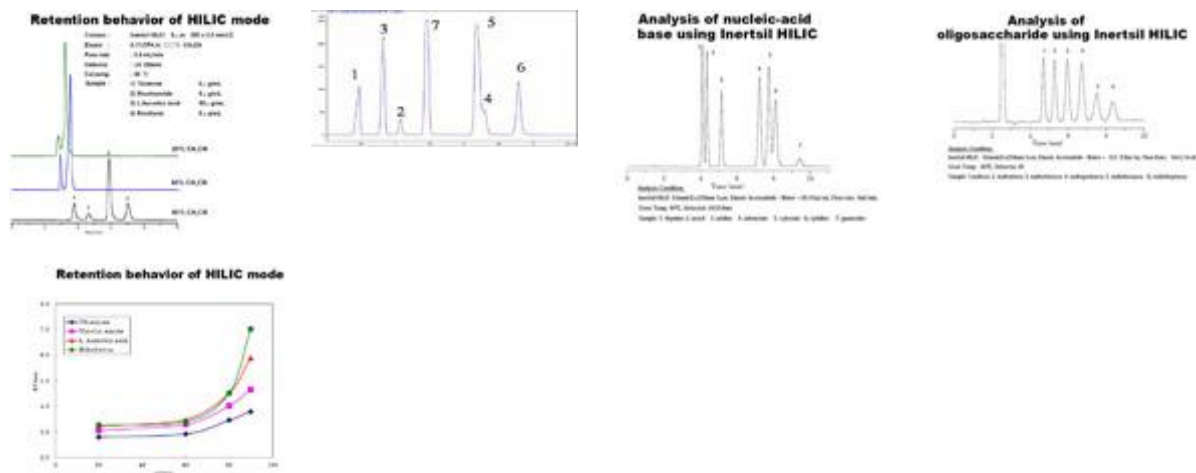
## What is HILIC mode? Hydrophilic Interaction Chromatography

Analysis of highly polar and basic compounds has been problematic since the beginning of HPLC. Some polar compounds are so difficult to analyze that they require high aqueous buffer content, even on the most inert reverse phase HPLC columns, resulting in imperfect peak shape and impaired MS sensitivity.

HILIC was developed as an alternative to reverse phase chromatography for polar compounds, and has also shown great promise in SFC. The elution order in HILIC mode is typically the opposite of what it might be in reverse phase mode. In HILIC, the HIGHER the organic concentration, the GREATER the retention of more polar compounds.

### Advantages of HILIC mode

- High organic content mobile phases result in low operating back pressure and ability to run at high flow rates
- A high organic solvent concentration of the mobile phase will lead to a high sensitivity LC/MS analysis.
- Reduced Ion suppression effect in LC/MS analyses.
- More precise quantitation of polar compounds owing to improved peak shape and the rapid elution of hydrophobic sample components.



Particle Size(s)	Particle Shape	Surface Area	Pore Size	Pore Volume	Silica Purity	Bonded Phase	End-Capping	Carbon Load	pH Range*
3, 5, 8 µm	Spherical	450 m <sup>2</sup> /g	100Å	1.05 mL/g	99.999%	alkyl diol	Yes	2	2 - 7.5

\* Inertsil phases are known to provide excellent results and long column life at pH levels of 9-10. However, optimum column may be achieved at a pH between 2 and 7.5.