

Using different Cogent HPLC stationary phases for different Selectivity - Tech Information

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Selectivity Differences in Cogent™ TYPE-C Stationary Phases

Each Cogent™ TYPE-C stationary phase features a unique bonded ligand, resulting in distinct selectivity profiles for various analytes. This diversity allows for tailored chromatographic performance depending on the application.

For example, as demonstrated in this Resource Center article, the Cogent Bidentate C18™ and Cogent UDC-Cholesterol™ columns exhibit significantly different retention behaviors under identical conditions. The Bidentate C18™, being more hydrophobic, provides greater overall retention. In contrast, the UDC-Cholesterol™ column enhances selectivity between specific analytes—such as anthracene and tert-butylbenzene—with a separation factor (α) of 2.30 vs. 1.58.

This variability in selectivity makes Cogent columns valuable tools for method development, enabling optimization of both retention and resolution. Importantly, this behavior is not limited to reversed-phase chromatography; it also applies to Aqueous Normal Phase (ANP) and classical normal phase techniques.



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