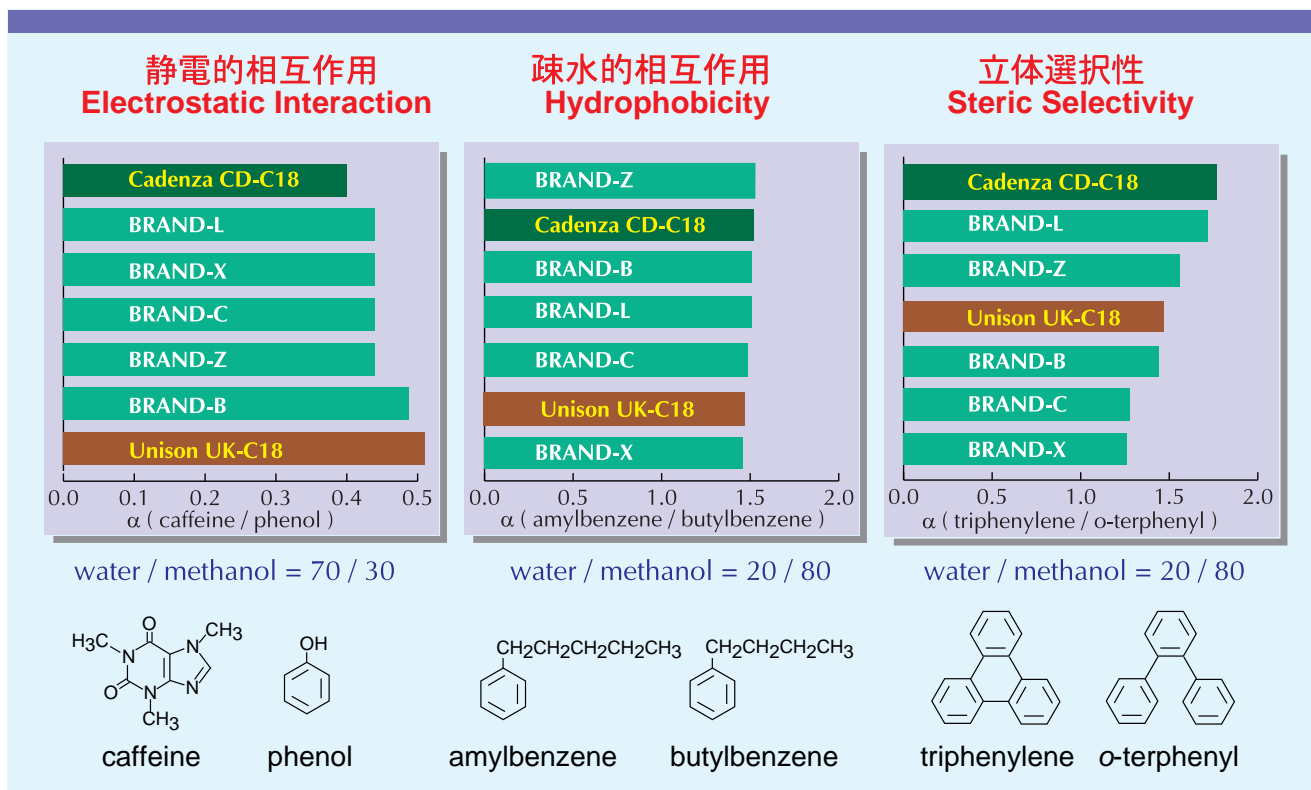


## Basic interaction of UK-C18



Ref) N.Tanaka et.al., J. Chromatg. Sci., 27, 721 (1989)

This diagram shows a comparison of the fundamental interactions between the ODS stationary phases of Unison UK-C18 and Cadenza CD-C18.

### HYDROPHOBIC INTERACTION

Hydrophobic interaction is the most important interaction in reversed-phase stationary phases and is evaluated by the separation factor of the methylene groups in alkylbenzenes. Unison UK-C18 has slightly lower hydrophobicity compared to Cadenza CD-C18, but there is no significant difference when compared to typical ODS stationary phases. The Unison UK-C18 is designed to have hydrophobicity comparable to conventional columns.

### ELECTROSTATIC INTERACTION

This interaction is essential for retaining and separating highly polar compounds. Unison UK-C18 is specifically designed with this consideration in mind. By incorporating a greater hydrogen bonding capacity compared to Cadenza CD-C18, it can enhance the retention and improve the separation of highly polar compounds. Additionally, reproducible elution behavior can be achieved even with 100% aqueous mobile phases.

### STERIC SELECTIVITY

The ability to recognize planar and bulky compounds is highly effective for the separation of similar compounds. Generally, ODS columns designed for high polarity have the drawback of significantly reduced ODS ligand density, making it difficult to spatially distinguish subtle structural differences. In this regard, Unison UK-C18 achieves a well-balanced surface structure that not only accommodates high polarity but also ensures stereoselectivity.