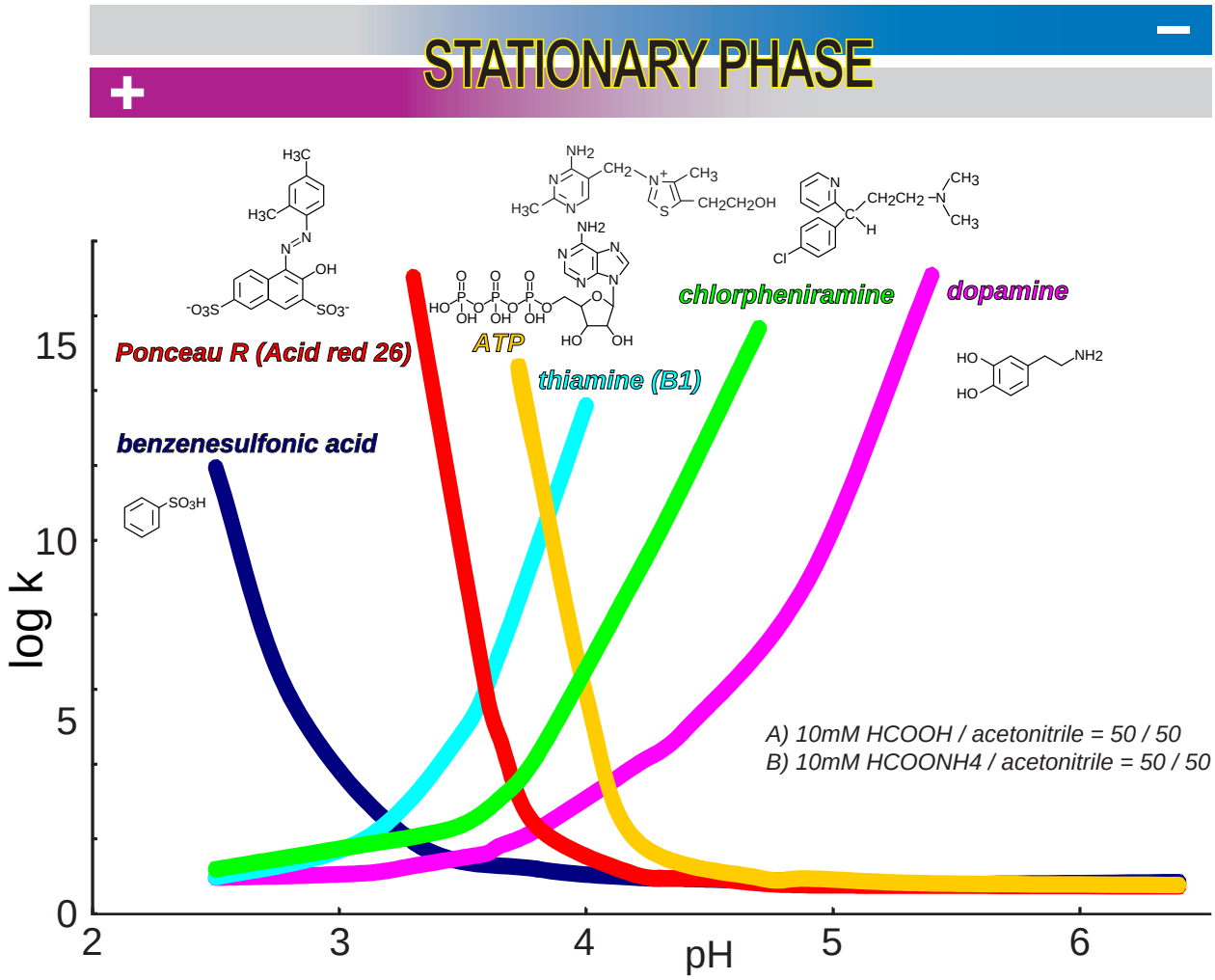
Nardis ND-NX

HPLC COLUMN NOTE

Ion Exchange Properties of the Nardis ND-NX Stationary Phase



The Nardis ND-NX column incorporates both anion and cation ion ligands. These charged ligands enable electrostatic interactions, making not only cation exchange and anion exchange possible but also normal-phase mode.

The diagram above demonstrates the relationship between the pH of the mobile phase containing 50% organic solvent, where normal phase mode is inactive, and the retention of ionic solutes. As the pH of the mobile phase decreases, the cationic nature of the stationary phase strengthens, resulting in stronger retention of acidic substances with anionic character. Conversely, as the mobile phase pH increases, the stationary phase becomes more anionic, enhancing the retention of cationic compounds, such as basic substances.

This column is not designed for the 'simultaneous analysis' of anionic and cationic compounds. It is necessary to optimize the mobile phase pH and ion strength gradient according to the ionization of the target compounds. If the optimization is insufficient, 'peak tailing' due to the dissociation properties of the substances may occur. Additionally, factors beyond the mobile phase, such as the pH and ion strength of the sample dissolution solvent, may require consideration.