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Estimation of Enantioresolution of Multiple Stereogenic Drugs Using Mobilized and/or Immobilized Polysaccharide-Based HPLC Chiral Stationary Phases

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Abstract : Enantioseparation of drugs with multiple stereogenic centers is challenging. This study objectives to evaluate the efficiency of different mobilized and/or immobilized polysaccharide-based chiral stationary phases to separate enantiomers of some drugs containing multiple stereogenic centers namely indenolol, nadolol, labetalol. The critical mobile phase variables (composition of organic solvents, acid/base ratios) were carefully studied to compare the retention time and elution order of all isomers. Different chromatographic parameters such as capacity factor (k), selectivity (α) and resolution (Rs) were calculated. Experimental conditions and the possible chiral recognition mechanisms have been discussed.

Keywords : HPLC, polysaccharide columns, enantio-resolution, indenolol, nadolol, labetalol
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