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Nota di contenuto	Chiral Separation Techniques; Contents; Preface; List of Contributors; 1 Method Development and Optimization of Enantioseparations Using Macrocyclic Glycopeptide Chiral Stationary Phases; 1.1 Introduction; 1.2 Structural Characteristics of Macrocyclic Glycopeptide CSPs; 1.2.1 Chiral Recognition Mechanisms; 1.2.2 Multi-modal Chiral Stationary Phases; 1.3 Enantioselectivity as a Function of Molecular Recognition; 1.3.1 Ionizable Molecules; 1.3.1.1 Polar Ionic Mode; 1.3.1.2 Reversed-phase Mode; 1.3.2 Neutral Molecules; 1.4 Complementary Effects; 1.5 Method Development 1.6 Optimization Procedures1.6.1 Polar Ionic Mode; 1.6.2 Reversed-phase Mode; 1.6.2.1 pH Effects; 1.6.2.2 Organic Modifier Effects; 1.6.3 Polar Organic/Normal-phase Mode; 1.6.4 Flow-rate and Temperature Effects; 1.7 Amino Acid and Peptide Analysis; 1.8 Conclusion; Acknowledgments; References; 2 Role of Polysaccharides in Chiral Separations by Liquid Chromatography and Capillary Electrophoresis; 2.1 Introduction; 2.2 Structures of Polysaccharide Chiral Selectors; 2.2.1 Synthesis of Polysaccharide Chiral Selectors; 2.2.2 Preparation of

Polysaccharide Chiral Stationary Phases

2.2.2.1 Preparation of CSPs by Coating; 2.2.2.2 Preparation of CSPs by Immobilization; 2.2.2.3 Coated versus Immobilized CSPs; 2.3 Properties of Polysaccharide CSPs; 2.3.1 Enantioselectivities; 2.3.2 Spectroscopic Studies; 2.4 Applications; 2.4.1 Analytical Separations; 2.4.2 Preparative Separations; 2.5 Optimization of Chiral Separations; 2.5.1 Mobile Phase Compositions; 2.5.2 pH of the Mobile Phase; 2.5.3 Flow-rate; 2.5.4 Temperature; 2.5.5 Structures of Solutes; 2.5.6 Other Parameters; 2.6 Chiral Recognition Mechanisms; 2.7 Chiral Separation by Sub- and Supercritical Fluid Chromatography; 2.8 Chiral Separation by Capillary Electrochromatography; 2.9 Chiral Separation by Thin-layer Chromatography; 2.10 Chiral Separation by Capillary Electrophoresis; 2.11 Conclusion; References; 3 Analytical and Preparative Potential of Immobilized Polysaccharide-derived Chiral Stationary Phases; 3.1 Introduction; 3.1.1 Scientific Developments in Polysaccharide Immobilization with Chiral Recognition Purposes; 3.1.2 State of the Art on Immobilized Polysaccharide-derived CSPs; 3.2 Scope of Immobilized Polysaccharide-derived CSPs; 3.3 Beneficial Characteristics of Immobilized Polysaccharide-derived CSPs; 3.3.1 New Selectivity Profile on Immobilized CSPs; 3.3.2 Universal Miscibility of Non-standard Solvents and their Contribution to the Performance of Analytical Methods; 3.3.3 Various Sample Injection Media; 3.3.4 Inhibition or Minimization of Racemization by Mobile Phase Switch; 3.3.5 Preparative Potential of Immobilized CSPs; 3.3.6 CSP Stability; 3.4 Method Development on Immobilized Polysaccharide-derived CSPs; 3.4.1 Selection of the Mobile Phase; 3.4.1.1 Analytical Method Development; 3.4.1.2 Preparative Method Development

Sommario/riassunto

Thoroughly revised, with either entirely new or completely updated contents, this is a practical manual for the small and large-scale preparation of enantiomerically pure products. The result is a vital resource for meeting the highest purity standards in the manufacture of chiral pharmaceuticals, food additives and related compounds. All the approaches covered here are highly relevant to modern manufacturing and quality control schemes in the pharmaceutical and biotech industries, addressing the increasingly important issue of drug safety in view of tougher regulatory standards worldwide.