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Enantiomer separations of amino acids and derivatives on immobilized polysaccharide phases with extended range of solvents using supercritical fluid chromatography

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This presentation discusses immobilized polysaccharide stationary phases with extended range of solvents for enantiomer resolution of select amino acids and derivatives using Supercritical Fluid Chromatography (SFC) and High Performance Liquid Chromatography (HPLC). Baseline resolution is achieved for selected amino acids and derivatives using this approach. The combination of an extended solvent (normally an aprotic solvent) in the presence of methanol and a suitable additive such as water, acid and base are critical for retention and resolution of amino acid pairs on immobilized columns. The amino acid separations are also achieved on the coated polysaccharide phases with alcohol based solvents in the presence of acid and base. In addition, the use of cyclofructan and polysaccharide phases for amino acids and small peptides separations along with the use of reversed phase chiral stationary phase for very polar compounds, acids and diacids, are also discussed.

Biography

Tony Q Yan is currently working for Pfizer, Inc. (Groton, CT, USA) in the field of impurity isolation for structure elucidation in the Department of Pharmaceutical Science. He has been working in pharmaceutical research and development in the area of chiral and achiral purifications, and impurity isolation for over 20 years since he graduated from the Department of Chemistry in University of Missouri in Rolla with PhD degree in 1995.

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