

Chiral Separation of D, L-Lactic Acid by Ligand Exchange High Performance Liquid Chromatography

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The enantiomeric of (D, L)-lactic acids have been successfully separated using copper (II) complexes of L-phenylalaninamide with high-performance liquid chromatography (RP-HPLC). The method is very convenient and easy to use, and the chiral selector is commercially available. The effect of various parameters (pH, eluent polarity, concentration of ligand) on enantioselectivity is discussed. Evidence is provided that a mechanism of ligand is actually occurring during the chromatographic separation. This method allows the determination of the enantiomeric excess of lactic acid in fermentation samples.