

High Performance Liquid Chromatographic Analysis of Enantiomeric Composition of Abused Drugs

REFERENCE: Sellers JK, Duffitt GL, Gaines ML, Liu RH: High performance liquid chromatographic analysis of enantiomeric composition of abused drugs; *Forensic Sci Rev* 8:91–109; 1996.

ABSTRACT: Numerous commonly abused drugs exist in two enantiomeric forms. Identifying the exact enantiomeric form is essential when only one of these two enantiomers is a controlled substance. Enantiomeric composition data may also help the investigation of clandestine laboratory activities. Although generally not as convenient as gas chromatographic methods, liquid chromatographic methods (LC) allow for the selection of larger and hopefully more effective derivatizing groups and the use of an "active" mobile phase. LC-based enantiomeric resolution approaches include derivatization with chiral agents, incorporation of chiral additives in the mobile phase, and the use of chiral stationary phases. Various applications of these approaches are reviewed. Unique detection procedures that were adopted in enantiomeric analysis are also reviewed.

Key Words: Abused drugs, chiral derivatization, chiral stationary phase, enantiomer, high performance liquid chromatography,
