5th International Conference on CURRENT TRENDS IN MASS SPECTROMETRY AND CHROMATOGRAPHY

September 25-26, 2017 Atlanta, USA

Chiral separation of Ketoprofen on an achiral NH2 column by HPLC using Vancomycin as chiral mobile phase additive

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A high-performance liquid chromatographic method for chiral separation of Ketoprofen racemate was developed. (R)- and (S)-Ketoprofen enantiomers were separated on a LiChrosorb NH2 column (250×4.6 mm, i.d 5 µm) at 20 °C, using 2-propanol/ potassium dihydrogen phosphate buffer (pH 6.0, 0.05 M) (50:50 v/v). Containing vancomycin as the mobile phase at a flow rate of 0.8 ml min-1 and detection wavelength of UV, the detector was set at 310 nm. Under these conditions, Ketoprofen enantiomers could be separated with a selectivity factor (α) of 2.172 and a resolution (Rs) of 4.78 using extremely low concentrations of the vancomycin chiral additive.

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