

Enantiomer elution order reversal of fluorenylmethoxycarbonyl-amino acid in high-performance liquid chromatography when using the polysaccharide-based chiral column and the mobile phase MeOH and ACN

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N-protected amino chiral acids are widely used as starting materials in pharmaceutical chemistry and biochemistry. Therefore, development of new methods not only for determination of enantiomeric purity of amino acid derivatives but also for their large scale production is very important.

FMOC is well now protecting group for α -amino acids and together with suitability for detection by fluorescence spectroscopy provides also enhanced UV-VIS absorbance to amino acid derivatives. Therefore, it is widely used in HPLC.

The goal of the present project is a study of enantiomer elution order of various amino acid (among them also FMOC) derivatives on novel polysaccharide-based chiral stationary phases and polar-, normal-phase and reversed-phase eluents. The effect of various minor additives and separation temperature on the enantiomer elution order will be also studied.

On the present (initial) step of the project the enantiomer elution order of FMOC-amino acids on polysaccharide-based chiral stationary phases with methanol and acetonitril as the mobile phases was studied.