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高效液相色谱使用两种类型的纤维素-三(对甲基苯甲酸酯)固定相手性拆分非

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Comparison of chiral separations of felodipine by high perforn chromatography using two cellulose tris(4-methyl benzoate)

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摘要 以高效液相色谱手性固定相法对非洛地平(FEL)进行手性拆分。分别采用两种类型的纤维素-三(对甲基苯甲酸酯)手性柱Chiral Chiralcel OJ-H进行比较实验,以正己烷-异丙醇(90:10, v/v)为流动相,考察了流动相、柱温对保留及手性拆分的影响。实验显示,两 van't Hoff图均发生了转折,在高温区域为焓驱动,在低温区域为熵驱动。两柱在温度升高时拆分FEL的分离度均提高,其中OJ-H的分 R。两种手性柱对FEL具有相似的拆分机理。

关键词: 高效液相色谱 手性拆分 手性固定相 非洛地平

Abstract: Chiral resolutions of felodipine (FEL) were compared using two cellulose tris(4-methyl benzoate) s phases, Chiralcel OJ-R and Chiralcel OJ-H. The effects of the mobile phase and the column temperature on the and separation were compared. Using n-hexane/2-propanol (90:10, v/v) as mobile phase, the FEL can be enantioseparated. There are transition temperatures in the van't Hoff plots of the two columns. In the higher temperature region the enantioseparation was enthalpy controlled, and in the lower temperature region it wa controlled. The higher temperature was good for the resolution of FEL enantiomers even though the selectivit change with maximum value at 19 ℃ for OJ-R and 14 ℃ for OJ-H. The two columns showed similar mechanism chiral separation.

Keywords: high performance liquid chromatography (HPLC) chiral separation chiral stationary phase felo

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