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FULL PAPERS

改进的方法用于制备键合型纤维素－三（苯基氨基甲酸酯）手性固定相

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摘要 改进了用于制备键合型纤维素衍生物手性固定相的传统的二异氰酸酯法。二异氰酸酯首先跟三乙氧基氨丙基硅烷反应，用所得到的产物作为间隔臂将纤维素衍生物固定在硅胶表面。考察了间隔臂的用量和长度对固定相手性识别能力的影响。与传统的二异氰酸酯法相比，此改进方法最大程度地避免了纤维素衍生物糖单元之间的交联。在改进的方法中，可以以非选择性的方式来制备固定相，这有利于固定相的快速制备。

关键词 手性固定相,键合,纤维素衍生物,改进方法

分类号

Improved Procedure for Preparation of Covalently Bonded Cellulose Tris-phenylcarbamate Chiral Stationary Phases

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Abstract The classical method for preparation of covalently boned cellulose derivative chiral stationary phases (CSP) with diisocyanate as spacer was improved. Diisocyanate was firstly allowed to react with 3-aminopropyltriethoxy- silane, and the resulting product was then applied as the spacer reagent to immobilize cellulose derivatives onto silica gel. Influences of the amount and the length of the spacer on the optical resolution ability of the CSP were investigated. Comparing improved procedure to classical diisocyanate method, the cross-linking between the glucose units of the cellulose derivatives was avoided to the most extent. With the improved procedure, regio-nonselective ways could be adopted to prepare covalently bonded CSP, which showed an advantage for the rapid preparation.

Key words chiral stationary phase covalently bonding cellulose derivative improved procedure

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