

固载离子液体高效液相色谱固定相分离有机化合物

邱洪灯, 蒋生祥, 刘霞*

中国科学院兰州化学物理研究所, 甘肃省天然药物重点实验室, 730000, 兰州

E-mail: gsliuxia@lzb.ac.cn

用 *N*-甲基咪唑和氯丙基硅胶反应, 制备成了一种新型的具有强阴离子交换作用的甲基咪唑键合硅胶——固载离子液体高效液相色谱固定相。采用去离子水作为流动相, 不需要添加其他任何有机溶剂, 基于固定相中的咪唑环阳离子和被分析物之间的疏水作用和静电作用, 在 6 分钟内分别对碱基和酚类进行了成功的分离。

关键词 离子液体, 固定相, 碱基, 酚类

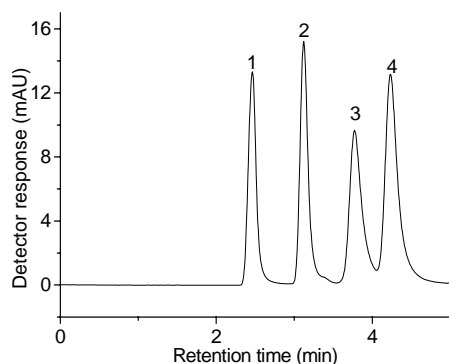


Fig.1 Chromatogram of four bases on column bonded with *N*-methylimidazolium. Peaks: 1. Cytosine; 2. Thymine; 3. 2-Aminopyrimidine; 4. 6-Chloroguanine.

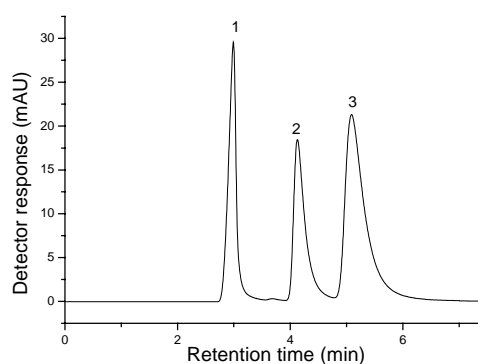


Fig. 2 Chromatogram of three hydroxybenzenes on column bonded with *N*-methylimidazolium. Peaks: 1. *m*-Aminophenol ;2. Resorcinol ;3. *m*-Nitrophenol.

参考文献:

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Separation of Organic Compounds on Immobilised Ionic Liquid Stationary Phase for HPLC

Qiu Hongdeng, Jiang Shengxiang, Liu Xia*

Key Laboratory for Natural Medicine of Gansu Province, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, 730000, Lanzhou

In this paper, a new anion-exchange stationary phase based on *N*-methylimidazolium immobilised on silica for high performance liquid chromatography is described. With this phase, four bases and three hydroxybenzenes were separated successfully in 6 minutes with only pure water as the eluent. That should be attributed to the reverse-phase and electrostatic interaction between *N*-methylimidazolium and analytes. The experimental results are satisfactory.