

A new 2-Ethyl-4-Methylimidazole-based stationary phase for HPLC separation

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A new HPLC stationary phase has been synthesized based on the ionic liquid 2-Ethyl-4-methylimidazole chloride. 2-Ethyl-4-methylimidazole was covalently immobilized on a silica substrate through an n-alkyl tether, the performance of the resulting stationary phase was determined by Fourier Transform Infrared (FT-IR), Thermogravimetric analysis (TGA), ¹³C NMR and the retention characteristics of it were evaluated in HPLC by using the mixture of methanol/acetonitrile and water as mobile phase. The retention characteristics of the test solutes show considerable promise for the separation of neutral solutes and points to the potential for a truly multimodal stationary phase.