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Poly(itaconic acid)-grafted silica stationary phase prepared in deep eutectic solvents and its unique performance in hydrophilic interaction chromatography

Yongxing Hu^{a,b}, Tianpei Cai^b, Haijuan Zhang^b, Jia Chen^b, Zuguang Li^{a,*}, Hongdeng Qiu^{b,*}

^aCollege of Chemical Engineering, Zhejiang University of Technology, Hangzhou 310014, China.

^bCAS Key Laboratory of Chemistry of Northwestern Plant Resources and Key Laboratory for Natural Medicine of Gansu Province, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, China

lzg@zjut.edu.cn

hdqiu@licp.cas.cn

*Corresponding author.

Abstract

In this study, a new stationary phase based on poly(itaconic acid)-grafted silica (Sil-PIA) were synthesized in deep eutectic solvents (DESs) and characterized in detail. Itaconic acid was homopolymerized on silica *via* surface radical chain-transfer reaction using DESs as a new kind of green solvents. Sil-PIA were obtained and characterized by Fourier transform infrared spectroscopy, elemental analysis and scanning electron microscopy. The retention changes of nucleosides and nucleobases on the columns was studied under different chromatographic conditions including salt

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