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Preparation of a nitro-substituted tris(indolyl)methane modified silica in deep eutectic solvents for solid-phase extraction of organic acids

Na Wang [a,b], Jiamin Wang [a,b], Yuan Liao[a,b], Shijun Shao [a,*]

[a] *Key Laboratory of Chemistry of Northwestern Plant Resources of CAS and Key Laboratory for Natural Medicine of Gansu Province, Lanzhou institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, P. R. China.*

[b] *University of Chinese Academy of Sciences, Beijing 100049, P. R. China.*

* Corresponding author. Tel: +86-931-4968209, Fax: +86-931-8277088

E-mail Address: sjshao@licp.cas.cn

Abstract

A new sorbent for solid-phase extraction was synthesized by chemical immobilization of nitro-substituted tris(indolyl)methane on silica in new and green deep eutectic solvents. Elemental analysis results indicated that deep eutectic solvents could be an alternative to the traditional solvents in preparing nitro-substituted tris(indolyl)methane modified silica. Coupled with high performance liquid chromatography, the extraction performance of the sorbent was evaluated by using four organic acids as model analytes. The rebinding experiments results showed that the nitro-substituted tris(indolyl)methane modified silica sorbent had a good adsorption capacity towards the selected organic acids. Under the appropriate experimental conditions, good precision and wide linear ranges with