

The Effect of Surfactant on the Particle Size of D-Phenylalanine Imprinted Polymeric Microbeads

Khan Hamayun, 박중곤*
경북대학교 화학공학과
(parkjk@knu.ac.kr*)

The aim of the present work was to develop phenylalanine (Phe) imprinted polymeric microbeads using a modified suspension polymerization method, in order to overcome the problems associated with the conventional bulk polymerization method, i.e., crushing, grinding and sieving of the bulk polymer.

In the current study, we have prepared D-Phe imprinted polymeric microbeads by the modified suspension polymerization using functional monomer, cross-linker, stabilizer and surfactant. The prepared microbeads were characterized by various analytical and instrumental techniques. It was found that the microbeads were the co-polymer of methacrylic acid and ethylene glycol dimethacrylate with spherical shape and porous nature. The amount of surfactant was varied and the mean particle size was decreased from 25 to 7 μm . In a batch system, the enantioselective separation ability of the prepared microbeads was evaluated and will be presented in terms of Phe uptake capacity and adsorption selectivity.

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