

## Characteristics of Selective Adsorption Using D-phenylalanine Imprinted Terpolymer Bead

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### Abstract

D-Phenylalanine(D-Phe) imprinted terpolymer P(AN-AA-AAm) bead was prepared by the wet phase inversion method.<sup>1)</sup> Acrylamide (AAm) and acrylic acid (AA) were used as the functional monomer and acrylonitrile (AN) was used as a physical cross linker.<sup>2)</sup> The template molecules were removed from the template matrix by washing with acetic acid solution, which reduced the population of the dimerized COOH group, but increased that of the free COOH group in the bead matrix, which was responsible for the selective adsorption.<sup>3)</sup> The adsorption selectivity of D-Phe imprinted terpolymer bead prepared by in-situ implanting method reached 0.7 and 0.8 at 1.0 g and 10g Phe/L racemate solution, respectively and the desorption selectivities were 2.0 and 1.8 at 1.0 g and 10 g Phe/L racemate solution, respectively. Separation of D-Phe from the racemate solution was demonstrated by a repeated batch experiment.

### References

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