

Chiral separation of phenylalanine using L-Phe imprinted copolymer membrane

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Molecularly imprinting process is followed by the introduction of small amount of template molecules in polymerization medium. After polymerization template is extracted from the polymer matrix leaving cavities corresponding to the template molecule, which makes polymer more selective.

The molecularly imprinting technology is an effective method of encoding information in bulk material on molecular scale. Due to this remarkable property, molecularly imprinting polymer has been used in the research of drug delivery, affinity based solid phase extraction, sensor technology and chiral separation.

We prepared L-Phe imprinted poly (AN-co-AA) copolymer membrane for the chiral separation of Phenylalanine. Ultrafiltration technique was used to investigate the separation ability of membrane. It was found that membranes not only selectively adsorb but also selectively reject solute.