

Supporting Information

Enantioselective Absorption of Enantiomers with Maleic Anhydride- β - Cyclodextrin Modified Magnetic Microspheres

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Synthesis of the β -CD monomer (MAH- β -CD)

The MAH- β -CD monomer, which can be copolymerized with other compounds containing a double bond, was completed by nucleophilic attack on the alcohol group in a dimethylformamide (DMF) solution. Typically, 0.005 mol of β -CD and 0.05 mol of MAH were dissolved in 30 mL of dried DMF under adequate ultrasonication, and the transparent mixture solution was subsequently placed in an 80°C oil bath for 10 h under vigorous stirring. After the reaction was completed and the mixture cooled, a yellow mixture solution was obtained. At this point, a white precipitate was immediately filtrated with the addition of 30 mL of trichloromethane, and washed with 100 mL of acetone four times. The final product was dried in a vacuum oven until a constant weight was maintained.

The elemental analytical result of the MAH- β -CD monomer is C: 45.68%; H: 5.19%, which indicate that the molecular structure of MAH- β -CD is agreement with the theoretic calculation of $C_{62}H_{80}O_{50}$. The degree of substitution is five. ^{13}C -NMR (400MHz, D_2O as the solvent, Fig. S-1) δ (ppm): 169 (C-10), 166 (C-7), 132 (C-8), 127 (C-9).

References

Y.Y. Liu, X.D. Fan. *Polymer* 2002, **43**,4997-5003.

Fig. S-1: ^{13}C -NMR spectrum of MAH- β -CD monomer

