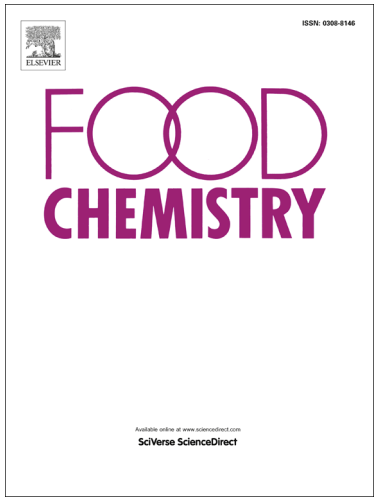

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Abstract

β-Agarase was immobilized by using tannic acid modified-Fe_3O_4 magnetic nanoparticles (TA-MNPs) as a support material. The MNPs were synthesized by improved chemical coprecipitation method and modified with TA for agarase immobilization. TA-MNPs and immobilized β-agarase were characterized by transmission electron microscopy (TEM), Fourier transform infrared spectroscopy (FTIR), and thermal gravimetric analysis (TGA), all of which indicated the successful surface modification of MNPs with TA and the immobilization of β-agarase. The optimal immobilization conditions for 25 mg TA-MNPs included 100 r/min oscillation speed, immobilization time of 2 h,