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The evaluation of antioxidant and antifungal properties of 6-amino-6-deoxychitosan *in vitro*

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Abstract

We synthesized 6-amino-6-deoxychitosan (NCS) through a series of reactions from chitosan (CS). The antioxidant ability of CS and NCS were investigated *in vitro*, including that of DPPH-radical and hydrogen peroxide, reducing power, chelating abilities and inhibition of lipid peroxidation. As expected, after the introduction of amino groups, antioxidant ability had improved significantly. Especially, scavenging effect against DPPH-radical and hydrogen peroxide of NCS were 97% and 92% at 1.6 mg/mL, respectively. Moreover, inhibition of lipid peroxidation was 57% at 0.1 mg/mL. And the reducing power of NCS was 0.68 at 0.8 mg/mL. Meanwhile, inhibitory effects against four fungi were also tested. Antifungal activity of NCS were better than those

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