# The Studies on the Production and Antioxidant Effect of Cassia Seed Wine


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**ABSTRACT**

Cassia seeds (Cassia tora Linn.) are also referred to as “ coffee beans ” or “ roasted cassia. ” It is the dried mature seeds of Fabaceae annual herbal plant, Cassia obtusifolia L. Cassia seeds have the effects of liver protection, fat lowering, bacteria suppression. Because alcohol has the ability to clear blood vessels, promote medicinal use, warm gastrointestinal system, and cure colds, it is possible to dissolve the anti-oxidation components of Cassia seeds to strengthen its medicinal power, and let the synergistic effect of medicine take place. Cassia seeds that are roasted and crushed to different extents were made into liqueur, wine, and beer.In this study , and the effect of storage temperatures and periods as well as the different manufacturing processes on the antioxidant property of Cassia seeds were investigated . It can be seen from the experiment results that ferrous ions chelating ability of Cassia seeds liqueur, after 14 days of soaking, can reach 90 % at antioxidant of concentration 12 mg/mL; similarly at antioxidant concentration of 12 mg/mL the DPPH free radicals scavenging ability reaches 90 %; longer periods of soaking resulted in the improvement in ferrous ions chelating ability and scavenging ability . As for Cassia seeds beer, best performance was found with heavily roasted and crushed Cassia seeds on the market. It ’ s ferrous ions chelating ability at antioxidant concentration of 2 mg/ml can reach 87 % and the DPPH free radicals scavenging ability at 4 mg/ml can reach 96 %. However, in quality evaluations, pulverized heavily roasted Cassia seeds on the market have the lowest score and is less acceptable; this might be because it ’ s color is too dark, unlike the beers people commonly know. As for Cassia seeds wine, there is a trend of decreasing anti-oxidative ability with the lengthening of storage time, regardless of storage at 4 ℃ or 25 ℃. It ’ s uncrushed Cassia seeds that have been roasted for 3 minutes have the best ferrous ions chelating ability, and reach 88 % of that of EDTA at various concentration tested . Three months storage results in best and most stable chelating ability, As for DPPH free radicals scavenging ability, crushed or uncrushed Cassia seeds on the market (heavily roasted) are the best, reaching a scavenging ability of 95 % at antioxidant concentration of 12 mg/mL . A comparison of Cassia seeds wine aged under 4 ℃ and 25 ℃,revealed that the scavenging ability at 4℃ is better and remains stable even with increasing storage time. In quality evaluations, unroasted and uncrushed Cassia seeds are more widely accepted. Heavily roasted Cassia seeds on the market scored higher in aroma, but it ’ s overall acceptability is less preferred



Keywords : Cassia tora ; Antioxidative ; Cassia tora wine ; scavenging DPPH free radicals ability ; ferrous ion chelating ability


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