Study on Antioxidant Activities of Purple Rice Wine Dregs

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ABSTRACT

The purpose of this study is to investigate the effects of pretreatment and fermentation time on the Hunter's L, a, b, pH values and antioxidant capacity of the liquor dregs of purple wine produced in Yunlin, Taiwan. It is expected to improve the utilization of purple wine dregs.

The results showed that the wine brewed from smashed purple rice produced higher ethanol concentration. The alcohol increased with the increase in fermentation time. Extraction rate of ethanol were 13.9% and 4.1% for smashed group and non-smashed group respectively. The pH values were lower for 0 and 10% ethanol extraction of non-smashed group. Hunter's L value (23.30± 0.19) for 70% ethanol extraction of the smashed group was significantly lower than that of other concentrations (0%, 10%, 95%) and non-smashed group. Hunter's a value (2.25 ± 0.30) for 70% ethanol extraction of the smashed group was significantly higher than that of other concentrations (0%, 10%, 95%) and non-smashed group. The b value of 95% ethanol extract of three weeks fermentation wine of smashed group showed the maximum of 1.99 ± 0.20. Antioxidant capacity in 70% ethanol extract had a better effect of 81.8% scavenging rate at a low concentration (125 μg / mL). As for the non-smashed group, 70% ethanol extract also showed the best performance. of treatment group, in the concentration 125 μg / mL when to remove the best, The removal rate reached 80.9 % at the concentration 125 μg / mL. However, the rates for other concentrations (0,% 10%, 95%) were worse than the smashed group. The free radical scavenging effect increased with the amount of purple rice wine dregs extracts added.

Keywords : black glutinous rice、wine dregs、anti-oxidative、Hunter ’s L、a、b.

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