DPPH AND HYDROXYL RADICAL SCAVENGING ACTIVITY EFFECT OF WILD AND FARMING ABALONE (*HALIOTIS DISCUS HANNAI*)

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ABSTRACT

The 1- diphenyl 2-picrylhyorazyl (DPPH) and hydroxyl radical scavenging activities from ethanol extracts of wild and farming abalones, *Haliotis discus hannai* were evaluated. DPPH scavenging activity was analyzed according to the method of Brand-Williams et al. Hydroxyl radical (OH) scavenging activity was measured by the Fenton reaction. DPPH scavenging activity of shell muscle of wild abalone evaluated at 1.0 mg/ml was 48.8% and that of gut was 56.1% at same concentration, and that of gonad was 63.7%. Form abalone were also observed that inhibition percentage values go on increasing with enhancements in concentration of research abalone extracts in the assay mixture. The all values of DPPH scavenging activity of wild abalones were higher than those of farming abalones. However, the all did not show a statistically significant difference ($p < 0.05$). OH scavenging activity of shell muscle of wild abalone was evaluated at 1.0 mg/ml was 47.2%, that of gut was 43.7% at same concentration, and gonad was 56.2%. The all values of OH scavenging activity of farming abalone were lower than those of wild abalone. However, the all groups did not showed a statistically significant difference ($p < 0.05$). A significant linear correlation (Correlation co-efficient r = 0.956, 95% confidence interval 0.114 - 0.129. Co-efficient of determination (r^2) = 0.914, $p < 0.01$) was established between DPPH and corresponding OH radical activity of extracts of abalone tissues.

Keywords: 1, 1- diphenyl 2-picrylhyorazyl (DPPH), *Haliotis discus hannai*, Hydroxyl radical (OH).