

Antioxidant Activity of Chlorophyll from *Sauropus androgynus* Leaves in Female Mice Induced Sodium Nitrite

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Abstract : Sodium nitrite which is widespread used as a color fixative and preservative in foods can increase oxidative stress and cause hemolytic anemia. Consumption of food supplement containing sufficient antioxidant, e.g. chlorophyll, reported can decrease these negative effects. This study was conducted to determine the effect of chlorophyll from *Sauropus androgynus* leaves on Malodialdehyde (MDA) and ferritin level. Experimental research with post-test only control group design was conducted using 24 female mice strain Balb-c. Sodium nitrite 0.3 ml/head/day given during 18 days, while the chlorophyll or Cu-chlorophyllin as much as 0.7 ml/head/day given the following day for 14 days. The mean of MDA levels of blood plasma in the control group, NaNO₂ induction, induction NaNO₂ and chlorophyll of *S. androgynus* leaves, induction of NaNO₂ and Cu-chlorophyllin from K-Liquid in sequence is 2.10±0.11mol/L, 3.44±0.38 mol/L, 2.31±0.18 mol/L, 2.31±0.13 mol/L, whilst the ferritin levels mean in each group is 62.71±6.42 ng/ml; 63.22±7.59 ng/ml; 67.45±8.03 ng/ml, and 64.74±7.80 ng/ml, respectively. Results of Mann Whitney test found no significant difference in MDA levels (p>0.05), while the One-Way Anova test result found no significant difference in ferritin levels between the groups of mice that received *S. androgynus* chlorophyll with a group of mice that received Cu-chlorophyllin after induction NaNO₂ (p>0.05). This indicates that chlorophyll from *S. androgynus* leaves as effective as Cu-chlorophyllin in decrease of MDA levels and increase of ferritin levels. Chlorophyll from *S. androgynus* are potential as food supplement in anemic conditions caused by sodium nitrite consumptions.

Keywords : ferritin, MDA, chlorophyll, sodium nitrite

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