

# **PENGARUH PENAMBAHAN SUSU SKIM PADA TEH PUTIH DAN TEH HITAM TERHADAP AKTIVITAS ANTIOKSIDAN TEH**

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## **Abstrak**

Tanaman teh banyak mengandung senyawa polifenol yang berperan sebagai antioksidan. Penambahan susu kedalam teh dapat mengurangi aktivitas antioksidan karena protein susu dapat berikatan dengan polifenol teh sehingga mengurangi kapasitas polifenol dalam mereduksi radikal bebas. Penelitian ini bertujuan untuk mengetahui pengaruh susu skim terhadap aktivitas antioksidan teh putih dan hitam. Penelitian dilakukan secara eksperimental laboratorium dengan desain faktorial  $2 \times 3 \times 1$ . Infusa teh putih dan teh hitam dibuat dengan kadar 2 gr teh/200 ml akuades (g/v). Infusa teh kemudian dicampur dengan susu skim 1, 1.5 dan 2 ml. Pemeriksaan aktivitas antioksidan dilakukan dengan metode DPPH kemudian dianalisis dengan spektrofotometer *UV-Visible* dengan  $\lambda = 517$  nm. Data dianalisis dengan uji *Oneway Anova* dan didapatkan penurunan bermakna aktivitas antioksidan antara teh tanpa campuran dengan campuran teh dan susu, nilai  $p = 0.000$  ( $p < 0.05$ ). Hasil uji T independent menunjukkan perbedaan bermakna pada aktivitas antioksidan teh putih dan teh hitam, nilai  $p = 0.000$  ( $p < 0.05$ ).

**Kata Kunci:** teh putih, teh hitam, susu skim, aktivitas antioksidan

# **THE EFFECT OF ADDITION OF SKIMMED MILK IN WHITE TEA AND BLACK TEA TO ANTIOXIDANT ACTIVITY OF TEA**

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## **Abstract**

Tea plant contains a lot of polyphenol compounds that act as antioxidants. The addition of milk into tea might reduce the antioxidant activity as milk protein could bind to the polyphenol of tea, thereby decreasing the capacity of polyphenol in reducing free radicals. This study is aimed to determine the effect of skimmed milk to antioxidant activity of white tea and black tea. This study was conducted in a laboratory experimental with 2x3x1 factorial design. Infusion of white tea and black tea was made with content 2 g of tea/ 200 ml of distilled water (g/v). Infusion of tea was then mixed with 1, 1.5 and 2 ml of skimmed milk. The assay of antioxidant activity was done using DPPH method and then analyzed by UV-Visible spectrophotometer at  $\lambda = 517$  nm. Data were analyzed by Oneway Anova and found a significant decrease in antioxidant activity among tea without mixture and tea mix with milk, the value of  $p = 0.000$  ( $p < 0.05$ ). Independent T-test results showed significant differences in antioxidant activity of white tea and black tea, the value of  $p = 0.000$  ( $p < 0.05$ ).

**Keyword:** white tea, black tea, skimmed milk, antioxidant activity