

**Formulasi Minuman Antioksidan Dari Campuran Teh Hitam, Daun Jeruk
Purut Dan Pegagan**

(Formulation of an Antioxidant Beverage from a Mixture of Black Tea, Kaffir
Lime Leaves, and Gotu Kola)
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ABSTRACT

This study aimed to determine the effect of adding kaffir lime leaf and gotu kola extracts on the antioxidant activity and sensory characteristics of herbal black tea beverages. Black tea is known to contain antioxidant compounds such as polyphenols, but it has a bitter taste and a less complex aroma. Therefore, it was combined with kaffir lime leaves, which are rich in essential oils and phenolic compounds, and gotu kola, which contains asiaticoside and triterpenoids as strong antioxidants. The research employed a one-way Completely Randomized Design (CRD) with five treatments and four replications: control (100% black tea), P1 (85% black tea, 5% kaffir lime leaves, 10% gotu kola), P2 (80%-10%-10%), P3 (75%-15%-10%), and P4 (70%-20%-10%). The tests included antioxidant activity analysis using the DPPH method and hedonic sensory tests (color, aroma, and taste). The results showed that treatment P4 produced the highest antioxidant activity at 66.60%, while the control was only 38.10%. Sensory tests indicated that P2 was most preferred in terms of color, and P3 in terms of taste. Based on these findings, it can be concluded that combining black tea with kaffir lime leaves and gotu kola enhances antioxidant activity and is sensorially acceptable, making it a promising natural functional beverage that is both practical and healthy.