

**Comparative analysis of antioxidant activities and antioxidant compounds contents in leaf, bark and pulp of different kenaf(*Hibiscus cannabinus* L.) cultivars**

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**Objectives**

Kenaf(*Hibiscus cannabinus* L., family Malvaceae) has been receiving an increased attention for fiber production and pharmaceutical purpose in the world. However, the use of Kenaf is little known in Korea. The objective of this work was to compare the antioxidant activity, total polyphenol and flavonoid content in the leaf, bark and pulp of different kenaf cultivar grown in different period in a year.

**Materials and Methods**

Preparation of Plant extracts: Kenaf (*Hibiscus cannabinus*) whole plant was harvested from field (Honcheon , Kangwon do, S. Korea) during the month of late August and early April in 2007. Voucher specimen is preserved in laboratory Kangwon national university, Chunchon South Korea.

Extraction and isolation: The leaf and stem were separated and kept in a safe place for sun dry. After sun dry the bark was pilled out from stem and were powdered. The methanolic extract of kenaf leaf, bark and pulp samples were evaporated and used for further analysis.

Estimation of Total Flavonoid Content, Total Phenolic Content and antioxidant activity were analysed.

**Results and discussion**

The results showed that there were no significant differences in the antioxidant activity, total polyphenol and flavonoid contents due to harvesting time, but among the somatic parts itself, the antioxidant activity (DPPH) of bark extracts was significantly higher than those of leaf and pulp. Unlike antioxidant activity, the total polyphenol contents were higher in leaf than in bark and pulp. Likewise, the flavonoid content in leaf was also higher but in bark and pulp it was negligible amount. Overall, this finding may lead to serious research to explore different chemicals content in kenaf bark, pulp and leaf.

## Results

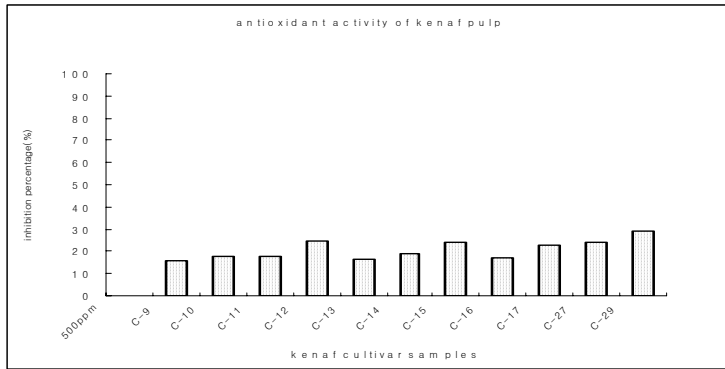


Fig. 1. DPPH radical scavenging activities in kenaf pulp.

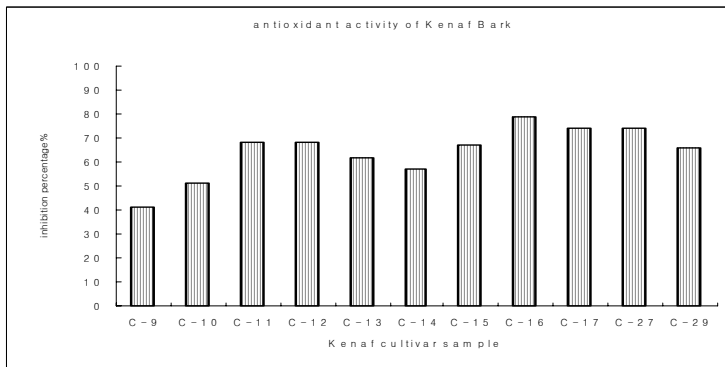


Fig. 2. DPPH radical scavenging activities in kenaf bark.

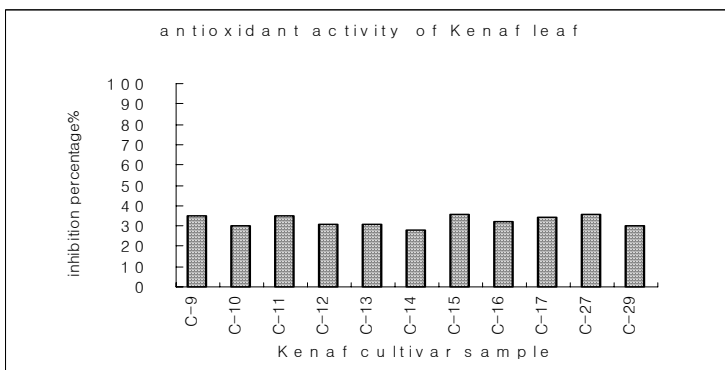


Fig. 3. DPPH radical scavenging activities in kenaf leaf.