

무궁화의 부위별 DPPH radical 소거능 및 SOD · CAT 활성

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Antioxidant Activities According to Part of
Hibiscus syriacus L.

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Objectives

In the present study, we analyzed the antioxidant activities by DPPH radical scavenging activity and superoxide dismutase activity, catalase activity of crude extracts of flowers and seeds from two cultivar of *Hibiscus syriacus* f

Materials and Methods

○ Materials

Flowers and seeds of *Hibiscus syriacus* L. with white coloured-flower cultivar and wine coloured-flower cultivar were collected from culture field of Korea atomic energy research institute in December 2007.

○ Extraction and measurement

Hibiscus syriacus L. was extracted one times in a reflux extractor for 7 hours, 500ml of ethanols. The extracted solution was filtered and concentrated using a rotary vacuum evaporator. DPPH assay was carried out as described by Blois (1958) and SOD activity was detected by the method of Beauchamp & Fridovich (1971). CAT activity was assayed by the Aebi method using hydrogen peroxide (H₂O₂) (Aebi, 1984).

Results

DPPH free radical scavenging activity of wine coloured- flower showed the highest value of 62.79% in the 1000 µg/ml of the ethanol extract. Its activity increased with an increment of extract concentration. Also its SOD activity was showed 66.5 U/mg protein of the highest among the other parts. In the CAT activity, white coloured-flower was showed 2.53 U/mg proteins.

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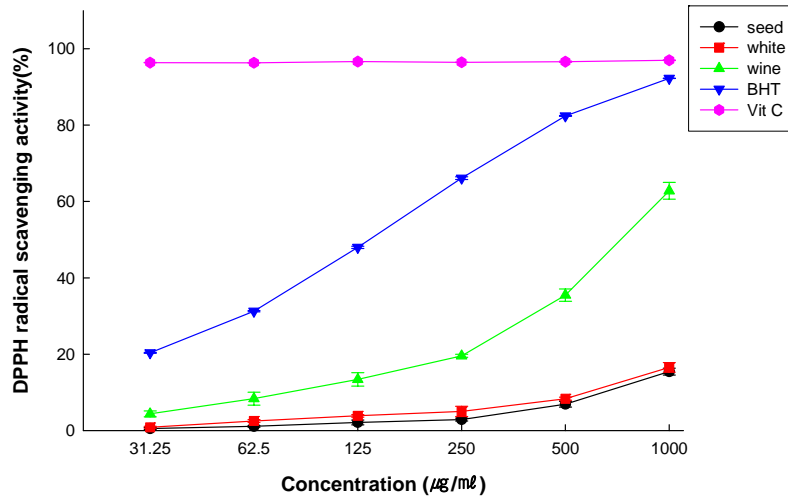


Fig. 1. DPPH radical scavenging activity of extracts from *Hibiscus syriacus* L.

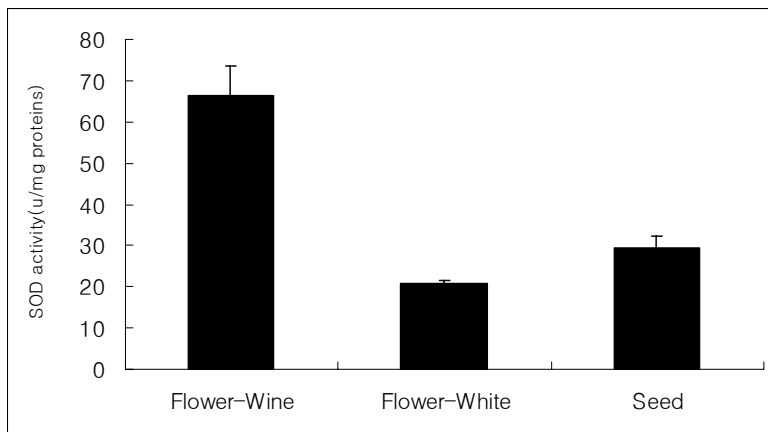


Fig. 2. SOD(superoxide dismutase) activity of *Hibiscus syriacus* L.

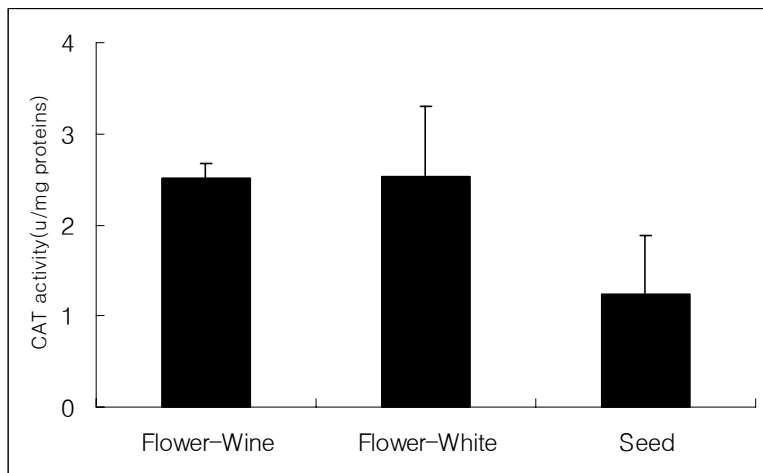


Fig. 3. CAT(catalase) activity of *Hibiscus syriacus* L.