

Antioxidant properties of selected medicinal plants in different locations in Korea

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실험목적 (Objectives)

Recently, the food industry has been using various natural antioxidants from plant origin. Medicinal crops cultivation area has been increasing rapidly. This study was conducted to determine the antioxidant properties of selected medicinal plants from different locations in Korea.

재료 및 방법 (Materials and Methods)

○ 실험재료

Samples were taken from three areas from different provinces namely: Bonghwa, Damyang and Hwasun.

○ 실험방법

Measurement of electron donating capacity

The electron donating capacity was analyzed using a method modified from the procedure described by Yen & Chen (1995).

Measurement of Reducing power

The reducing power of extracts was determined by the method of Oyaizu as modified by Chang et al. using extract solutions of concentration 0.1-1.0 mM GAE.

Measurement of Total phenolic compounds

Total phenolic compounds were determined using the procedure by Zielenski and Kozłowska (2000).

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실험결과 (Results)

The electron donating ability of *Cnidium officinale* Makino (shoots: 88.47; roots: 38.552) was highest among the medicinal plants in Bonghwa; In Damyang, *Paeonia suffruticosa* (shoots: 90.877; roots: 89.861); and in Hwasun, *Scutellaria baicalensis Georgi* obtained highest values (shoots: 89.233; roots: 83.965). In the case of reducing power *Platycodon grandiflorus* showed highest (shoots: 1.6320),

however when it comes to the roots, *Cnidium officinale* Makino obtained highest at 0.4813 in Bonghwa and comparative with the 2 other regions. Based on the Total phenolic compounds, *Cnidium officinale* Makino was highest in Bonghwa; In Damyang, *Polygonati rhizoma* obtained highest values and in Hwasun, *Scutellaria baicalensis Georgi* was highest.

Generally, *Cnidium officinale* Makino exhibited almost highest values in all the parameters, which were used to analyze antioxidant property.

* 시험성적

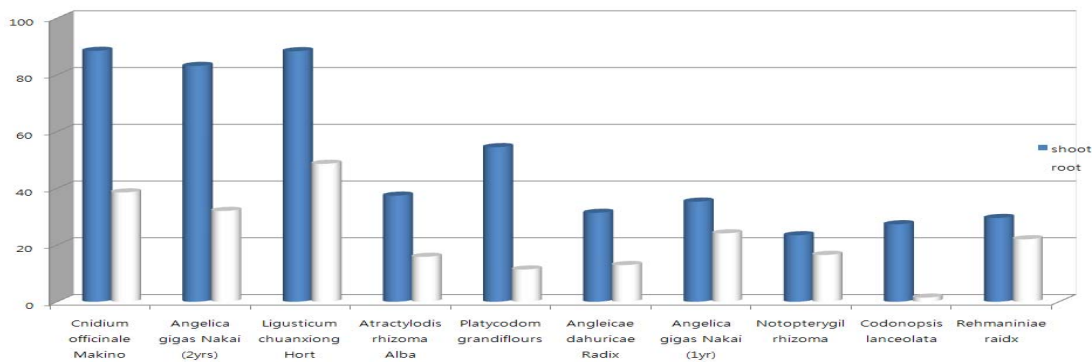


Fig1. EDA of medicinal plants in Bonghwa

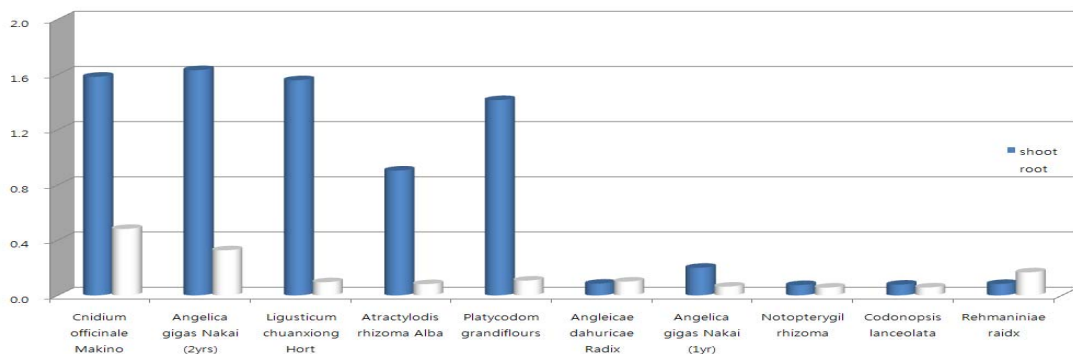


Fig2. Reducing power of medicinal plants in Bonghwa