

## Antioxidant Activity of *Glycyrrhiza cultivar* Extracts

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Antioxidants are involved in the defense mechanism against the attack of free radicals. This study was carried out to determine the antioxidant activity of new variety of *Glycyrrhiza cultivar* radix, Wongam and Sinwongam. Dissolved freeze dried Wongam and Sinwongam extracts were filtered by 0.2  $\mu\text{m}$  filter and serially diluted at the concentrations of 10  $\mu\text{g/mL}$ , 50  $\mu\text{g/mL}$ , 100  $\mu\text{g/mL}$ , 500  $\mu\text{g/mL}$ , and 1000  $\mu\text{g/mL}$ . The antioxidant potential was determined by DPPH (1,1-diphenyl-2-picrylhydrazyl) radical scavenging activity, ABTS (2,2-azino-bis (3-rthylbenzthiazoline-6-sulfonic acid) diammonium salt) radical cation decolorization assay, nitrite radical scavenging assay, and ferric reducing antioxidant power (FRAP) assay. DPPH radical scavenging activities (i.e. the highest value  $50.9 \pm 0.8\%$  by Wongam and  $82.6 \pm 1.1\%$  by Sinwongam), ABTS radical scavenging activities (i.e. the highest value  $88.1 \pm 1.8\%$  by Wongam and  $98.6 \pm 0.1\%$  by Sinwongam), and nitrite radical scavenging activities (i.e. the highest value  $87.3 \pm 1.6\%$  by Wongam and  $89.8 \pm 0.8\%$  by Sinwongam) increased in a dose-dependent manner. In addition, ferric reducing power activities also increased in a dose-dependent manner. The FRAP value of Wongam and Sinwongam extracts were  $0.72 \pm 0.03$  and  $0.99 \pm 0.06$  compared to ascorbic acid, as a positive control, was  $1.32 \pm 0.02$ . These results suggested that Wongam and Sinwongam have beneficial effects as a potent antioxidant.

**Key words:** Antioxidant activity, *Glycyrrhiza cultivar* radix, Wongam, Sinwongam

[This work was carried out with the support of “Cooperative Research Program for Agriculture Science and Technology Development (Project No. PJ014246022019)” Rural Development Administration and by the Ministry of Education University Innovation Support Project.]

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