

Antioxidative Effects of Extracts from *Ixeris dentata*

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The whole plant of *Ixeris dentata*, a typical oriental herb, has been used for treatment of pneumonia, contusion, tumor and hepatitis^{1,2)}. It also has been used for treatment of allergic diseases as a folk therapy in Korea. *I. dentata* is known to have aliphatics, triterpenoids and sesquiterpene glycosides in its composition³⁾. The antioxidative effects of water- and ethanol-extracts from *I. dentata* were analyzed with 2,2-diphenyl-1-picrylhydrazyl (DPPH) and comparisons were made on the basis of RC₈₀ value which indicated the amount required for 80% reduction of DPPH. The RC₈₀ of the ethanol extract from *I. dentata* leaf was 32.26 μ g/ml. While the RC₈₀ of ascorbic acid and glutathione, well-known antioxidants was 15.11 and 52.40 μ g/ml, respectively. However, in case of the water extract from *I. dentata* root the value was 547.77 μ g/ml. On the whole, groups of ethanol extracts resulted in a higher scavenging activity than the water extracts. Especially, the extracts from leaf had an excellent activity compared with that of *I. dentata* stem or root. It is suggested that *I. dentata* is useful as a source material for nutraceutical and pharmaceutical applications.

1. Kim, M. K. and Lee, M. S. (1988), Volatile flavor com components of *Ixeris dentata* and *Amaranthus mangostanus*, *J. the Korean Society of Agricultural Chemistry and Biotechnology* **31**, 394-399.
2. Kim, S. H. (1995), Inhibitory effects of *Ixeris dentata* on the mutagenicity of aflatoxin B1, *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine and the growth of MG-63 human osteosarcoma cells, *J. Korean Society of Food Science and Nutrition* **24**, 304-305.
3. Arai, Y., Kusumoto, Y., Nagao, M., Shiojima, K., Ageta, H. (1963), Composite constituent: aliphatics and triterpenoids isolated from the whole plants of *Ixeris debilis* and *I. Dentata*, *Yakugaku Zasshi* **103**, 356.