

Antioxidative and Antiradical Properties of Plant Phenolics

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The plant phenolic compounds such as flavonoids, tannins and phenolic acids appeared to be strong antiradical and antioxidant compounds. The number of hydroxy groups and the presence of a 2,3-double bond and orthodiphenolic structure enhance antiradical and antioxidative activity of flavonoids. The glycosylation, blocking the 3-OH group in C-ring, lack of a hydroxy group or the presence of only a methoxy group in B-ring have a decreasing effect on antiradical or antioxidative activity of these compounds. Tannins show strong antioxidative properties. Some tannins in red wine or gallate esters were proved to have antioxidative effect *in vivo*. The number of hydroxy groups connected with the aromatic ring, in *ortho* or *para* position relative to each other, enhance antioxidative and antiradical activity of phenolic acids. The substitution of a methoxy group in *ortho* position to the OH in monophenols seems to favour the antioxidative activity of the former.

Key words: Plant Phenolics, Antiradical Activity, Antioxidative Activity