

Screening for Antioxidative and Antimutagenic Capacities in 7 Common Vegetables Taken by Korean

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This study was performed to investigate the antioxidative effect as the inhibition of MDA and BSA conjugation reaction, inhibition of lipid peroxidation and the scavenging effect on DPPH radical, and antimutagenic capacities as the Ames test in 7 common vegetables taken by Korean for suggestion of prevention and dietetic treatment of chronic diseases and development of antioxidative and antimutagenic functional food.

The water extracted fractions of perilla leaves were most effective in the inhibition of MDA and BSA conjugation reaction showing 77.2% of inhibition rate among 7 vegetables. The inhibition rates of ethanol extracted fractions of sedum and wild water dropwort on the lipid peroxidation were 67.1% and 61.5%, respectively. The ethanol extracted fractions of crown daisy and wild water dropwort showed the most effective results among 7 vegetables in the DPPH radical scavenging capacities showing inhibition rate of 78.8% and 73.6%, respectively. The indirect and direct antimutagenic effects of ethanol extract of 7 vegetables were examined by Ames test using *Salmonella typhimurium* TA98 and TA100. Inhibitory effects of wild water dropwort was superior to the other vegetables on the Ames test. These results suggest that common 7 vegetables taken by Korean are believed to be a possible antioxidative and antimutagenic capacities, although the results were different, some or less, according to the assay method and vegetables used.