

عنوان مقاله:

Flavonoid Content Correlation With Scavenging Of Nitric Oxide Radicals, Ferric Reducing Power And Cupric Chelating Activity Of Catharanthus roseus L

محل انتشار:

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خلاصه مقاله:

Oxidative stresses caused by free radicals are the reasons of many diseases such as inflammation and cancer; therefore, the plant or plant products that can act as inhibitors of these radicals can have an important role in controlling the related diseases. For the purpose of investigating the anti-oxidation ability of *Catharanthus roseus*, ethanolic extract of the root, stem, leaf, flower, seed pod, and seed of the plant was prepared, and this ability was measured based on nitric oxide scavenging radical, ferric reducing power (FRP), and cupric chelating activity (CCA) against standards ((ascorbic acid, ethylenediaminetetraacetic acid (EDTA), Butylated hydroxyanisole (BHA), and Butylated hydroxytoluene (BHT)). Flavonoid content was determined to be higher in leaves than in other organs. The results showed that extract of root, seed, and leaf (228.75 ± 1.47 , 209.31 ± 2.23 , and $228.75 \pm 1.47 \mu\text{g mL}^{-1}$, respectively) after ascorbic ($142.98 \pm 1.01 \mu\text{g mL}^{-1}$) had the best performance in inhibiting half of nitric oxide radicals. After standards, root had the best ferric reducing power. The copper ion chelating ability by seed extract or ascorbic acid (521.67 ± 3.79 and $501.75 \pm 3.87 \mu\text{g mL}^{-1}$, respectively) didn't have a significant difference, but it was weaker than EDTA ($250.46 \pm 2.90 \mu\text{g mL}^{-1}$). Pearson's coefficient of determination between flavonoid content and antioxidant capacity of extract based on nitric oxide radical inhibition, ferric reducing power and cupric chelating activity were -0.817 , -0.728 , and -0.783 , respectively. Therefore this plant can be involved in the inhibition of degenerative diseases. It can also be used in food and pharmaceutical industries its strong antioxidants

کلمات کلیدی:

Catharanthus roseus nitric oxide ferric reducing power cupric chelating activity

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