ABSTRACT

The present study was designed to evaluate the antioxidant activity of 5 organic solvent extracts (petroleum ether, n-hexane, chloroform, ethyl acetate and methanol) of wheat grains, 3, 5 and 7 days old wheat seedlings. To determine the antioxidant activity of five extracts of four different samples, 1,1-diphenyl-2-picrylhydrazyl and 2,2'-azinobis-(3-ethylbenzothiazoline-6-sulfonic acid) radical scavenging activity, total phenolic content and ferrous reducing power ability were carried out. 1,1-Diphenyl-2-picrylhydrazyl radical scavenging effect of chloroform and ethyl acetate extracts of 3 days old wheat seedlings was higher than wheat grains. Chloroform, ethyl acetate and methanol extracts of 3 days old wheat seedlings exhibited higher 2,2'-azinobis-(3-ethylbenzothiazoline-6-sulfonic acid) radical scavenging effcet than extracts of other samples. The phenolic content was high in chloroform, ethyl acetate and methanol extract of 5 days old wheat seedlings. When compared with wheat grain, reducing power ability was high in chloroform, ethyl acetate and methanol extract of wheat seedlings, especially in 3 and 5 days old wheat seedlings. From the above results, it was concluded that chloroform, ethyl acetate and methanol extract of 3, 5 and 7 days old wheat seedlings showed better antioxidant activity than the wheat grain extracts. Hence, the results of the present study suggest the intake of wheat seedlings as a food supplement to combat the diseases caused by free radicals.