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Antioxidant activities, phenolic compounds, and vitamin C contents of green, red, and yellow pepper fruits

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Pepper is an important crop in the world, because of its economic importance, also due to the nutritional and medicinal value of its fruits and spices used as food flavorings. Their fruits are considered a good source of antioxidant and biologically active compounds, such as carotenoids, flavonoids, vitamins, capsaicinoids and mineral elements. The objective of this study was to evaluate the antioxidant activity and vitamin C content of different color pepper fruits. Three sweet pepper cultivars (*Capsicum annuum L.*), blocky Red, blocky Yellow and green, and one hot (*Capsicum frutescens*) tabasco green and ripped tabasco (red). Proximate composition, total soluble solids, vitamin C content and color (L, a, b) were determined. Ether extracts were studied to evaluate total phenolic compounds, total flavonoids, and 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging activity. Tabasco red had the highest value of total solids (10.83%), protein (2.16%), ash (1.06%) and vitamin C (215.05mg/100g) fresh matter. Total phenolic contents ranged from 214.3to 489.7mg as garlic acid/100g, and total flavonoids ranged from 186.1 to 467.2 mg as quarestin/100g fresh sample, respectively. Ripped tabasco red had significantly ($P \leq 0.05$) higher value of DPPH scavenging activity (78.65 %) than other samples. Green had lower content of total phenolic compounds , vitamin C, and antioxidant activity than yellow and red samples.These results illustrate that red pepper had high content of total phenolic, flavonoids and vitamin C and exhibit strong antioxidant activity.

Biography

Hussein. A. Abd El-aal working at Department of Food Science, Minia University, Minia, Egypt. His experience includes various programs, contributions and participation in different events for diverse fields of study. His research interests reflect in his wide range of publications in various national and international journals.

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