



Bioactive component analysis of dices of pomegranate fruits in different genotypes

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Abstract

Pomegranate fruit is a type of fruit belonging to the family of Lythraceae, consisting of shell, kernel, grains and dice. In this study, pomegranates of 3 different genotypes (local name : deve dişi, hicaz and nuz ekşisi) harvested (October-December), which are widely cultivated in the province of Gaziantep, Oğuzeli, were collected, and after identification, the dice sections were removed and dried in the shade. Total antioxidant and total oxidant levels, antimicrobial activities, DNA protective activity and total flavanoid and total phenolic content were determined in 18 extracts in 3 different solvents (methanol, ethanol and DMSO) with solid-liquid extraction. Kirby-Bauer disc diffusion method was used to determine antimicrobial properties. According to the results obtained, 100% of *Escherichia coli*, *Stenotrophomonas maltophilia*, *Staphylococcus aureus* strains were resistant to all membrane extracts. While antioxidant levels of all membrane extracts were found highly and oxidant levels were found to be low. It was determined that the extracts have the potential to protect DNA against oxidative damage caused by UV and H₂O₂. Total phenolic determination by Folin-Ciocalteu method; Total flavonoid amount was measured by AlCl₃ using colorimetric method. Compared to the solvent and extraction methods used, high results were obtained in both phenolic and flavonoid determinations in all extracts, although they differed slightly among themselves. While the pomegranate fruit is consumed as food, the dice and shell parts are discarded. According to our study results, it is thought that alternative new products that can be used in complementary medicine can be obtained from pomegranate membranes that have a rich bioactive composition.

Biography

Dr. Sibel Bayıl Oğuzkan is presently in the Department of Medical Services and Techniques, Vocational School of Health Services, University of Gaziantep, Gaziantep, Turkey