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Consideration of physicochemical characteristics, total polyphenol content and flavonoids in various Iranian commercial juices

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Juice is an important source of vitamins required for a human. The main goal of the present study was to develop an analytical method for the quality control of juice products. Two physicochemical characteristics of juice (pH and Brix) were analyzed and compared to the related standards. Additionally, the ferric reducing antioxidant power was applied for evaluation of antioxidants and Catechin, Eriocitrin, Naringin, Hesperidin and Quercetin contents were evaluated by reversed-phase high-performance liquid chromatography (RP-HPLC) and UV detection at 280 nm. The RP-HPLC method was performed using a C8 column with gradient elution of water, acetic acid, and acetonitrile. Maximum LOD is 1.39 ppm for Eriocitrin and spiked sample's recoveries of at least 82.81% were observed for Naringin. The method was applied for the determination of pH, Brix, total polyphenol content and flavonoids in 73 Iranian commercial juices, such as orange, pineapple, peach and sour cherry juice. Results indicated that the determination of flavonoids was highly valuable for quality control of commercial fruit juice.

Biography

Mannan Hajimahmoodi received her Doctorate in Pharmacy and PhD from Food Science and Nutrition at Tehran University of Medical Sciences (TUMS). Now, she is Professor in Drug and Food Control Department, Faculty of Pharmacy, TUMS. She has published many papers and managed more than 20 projects on food and nutrition. She is skillful in analytical instruments such as HPLC, GC/FID, IR, UV, and highly interested in analytical methods about food safety and quality.

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