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Bioactive compounds and antiradical activity of juice and pulp from lemon, mandarin and orange fruits cultivated in saudi arabia

Fahad Y. Al-Juhaimi
King Saud University, Saudi Arabia

Abstract

Citrus fruit is very popular in many parts of the world due to its distinctive flavor, taste, and aroma as well as multiple health benefits associated with it. The consumption of citrus fruits or their products is believed to have beneficial effects against different diseases, the main reason being the presence of important bioactive compounds. Juice and pulp from Eureka lemon (*Citrus limon*), Kinnow mandarin (*Citrus reticulata*) and Orlando orange (*Citrus sinensis*) fruits cultivated in Saudi Arabia were analyzed for total phenolics, ascorbic acid and antiradical activities. Juices from lemon, mandarin and orange had 79.21, 91.18 and 107.37 mg GAE/100mL total phenolics; 31.24, 53.15 and 53.24 mg/100mL ascorbic acid and 48.3, 59.19 and 61.35% DPPH radical scavenging activities, respectively. Pulp left after juice extraction from lemon, mandarin and orange shown 98.38, 104.98 and 123.02 mg GAE/100mL total phenolics; 38.52, 57.63 and 61.38 mg/100mL ascorbic acid and 59.6, 62.82 and 69.31 % DPPH radical scavenging activities, respectively. The results show that juice and pulp from locally grown citrus fruits is of good quality and a valuable source of health promoting constituents. Citrus pulp which is usually wasted after juice preparation might be utilized as valuable source of bioactives for development of nutraceutical and functional foods.

Biography

Fahad Y. Al-Juhaimi is a renowned food technologist in Saudi Arabia, he earned his MS (1996) and Ph.D. (2001) degrees in 2001 from University of Leeds, UK. Currently he is Chairman for the department of Food Science & Nutrition in King Saud University. He has previously held various positions of including Dean of Riyadh Technology College. He is an active researcher in area of food technology and has published significant research papers. His research interests also include modified atmosphere packaging, innovative food processing, functional foods etc.

faljuhaimi@ksu.edu.sa