Turkish Journal

of

Agriculture and Forestry

Keywords
Authors

agric@tubitak.gov.tr

Scientific Journals Home Page

Turkish Journal of Agriculture and Forestry

Antioxidant Activity of Selected Fruits and Vegetables Grown in Turkey

Feryal KARADENİZ, Hande Selen BURDURLU, Nuray KOCA, Yeşim SOYER
Ankara University, Faculty of Engineering, Food Engineering Department, Campus of Agricultural Faculty,
06110 Dışkapı, Ankara - TURKEY

Abstract: Antioxidant activities of different fruits (apple, quince, grape, pear and pomegranate) and vegetables (potato, onion, spring onion, red radish and red cabbage) were determined. In addition, total phenolic and flavonoid contents of those samples were assessed. Among fruits, pomegranate had the highest (62.7%) antioxidant activity, followed by quince (60.4%), grape (26.6%), apple (25.7%) and pear (13.7%). The antioxidant activity of vegetables ranged from 40.8% (red cabbage) to 12.5% (onion). Total phenolic and flavonoid contents in fruits varied from 326 to 4306 mg of catechin kg^{-1} and from 282 to 2115 mg of catechin kg^{-1}, respectively. Those in vegetables ranged between 536 and 2166 mg of catechin kg^{-1} and between 153 and 842 mg of catechin kg^{-1}, respectively. A high and significant correlation between antioxidant activity and total phenolic content was determined in fruits (r^2 = 0.9307, $P < 0.01$) and vegetables (r^2 = 0.9361 $P < 0.05$). However, flavonoid content was not significantly correlated with antioxidant activity in vegetables, while it was significantly related in fruits (r^2 = 0.8316, $P < 0.01$). It was observed that total phenolic content is the major contributor to the antioxidant activity of fruits and vegetables.

Key Words: Antioxidant activity, total phenolics, total flavonoids, fruits, vegetables

---

Turk. J. Agric. For., **29**, (2005), 297-303.
Full text: pdf
Other articles published in the same issue: Turk. J. Agric. For.,vol.29,iss.4.