

Antioxidant Property of Honey with Dried Cherry

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Abstract : Honey serves as a source of natural antioxidants, which are effective in reducing the risk of heart disease, cancer, immune-system decline, cataracts, different inflammatory processes, and also prevent deteriorative oxidation reactions in foods such as enzymatic browning of fruit and vegetables. Honey is a natural saturated sugar solution, but it also contains certain minor constituents, proteins, enzymes, amino and organic acids, lipids, vitamins, phenolic acids, flavonoids and carotenoids. It is consumed in its natural form alone, but also in combination with nuts and various kinds of dried fruits. The aim of this research was to investigate the contribution of dried cherry on phenols (TPh) and flavonoids (Fl) contents and antioxidant activities of honey. Phenolic compounds in Serbian polyfloral (PH), linden (LH) and acacia (AH) honey and also in their mixtures with dried cherry, in 40% mass concentrations (PH40; LH40, AH40), were determined. In comparison to honey, TPh increased 2.25 times for LH40, 2.16 times for AH40 and 1.45 times for PH40, while Fl increased 2.81-fold for PH40, 1.21-fold for LH40 and 1.44-fold for AH40. Antioxidant activity was investigated with two assays, DPPH test and reducing power (RP), and expressed as EC50DPPH and RP0.5 values. The EC50DPPH values were: EC50PH40 = 1.16 mg/ml; EC50LH40= 1.42 mg/ml and EC50AH40= 1.69 mg/ml, while RP0.5 were: RP0.5PH40 = 15.05 mg/ml; RP0.5LH40 = 16.09 mg/ml and P0.5AH40 = 17.60 mg/ml. Our results indicate that supplementation of polyfloral, linden and acacia honey with 40% dried cherry improves antioxidant activity of honey by enriching the phenolic composition.

Keywords : antioxidant activity, dried cherry, honey, phenolics

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