

BIOACTIVE COMPONENTS, ANTIOXIDANT ACTIVITIES, AND PRINCIPAL COMPONENT ANALYSIS OF TWO HEALTH BENEFIT FOOD GROUPS FROM ANATOLIA: MONOFLORAL HONEYS AND HONEY-BEE POLLENS

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Honey is a natural food product which is well known for its valuable nutritional and medicinal qualities. The main purpose of this work is to reveal the essential mineral composition, antioxidant activity, total phenolic and vitamin B2 contents of 14 monofloral honeys and 6 honeydew honey samples from different botanical origins and different regions of Anatolia. Moreover, principal component analysis is applied to the all data for the possible differentiation of honeys from different botanical origins [1]. Vitamin B2 is an essential vitamin that can only be obtained from foods. However, the low vitamin B2 levels in food contents make difficult the quantitative determination of this vitamin. Thanks to the high fluorescence quantum yield of vitamin B2 (riboflavin), vitamin B2 contents of honey samples were determined by a capillary electrophoresis method coupled with laser induced fluorescence detector.

Bee pollen has been applied for centuries in traditional medicine. In comparison to the huge amount of worldwide reports on honey species, the research on the chemical composition of bee pollen is still scarce. This research aims to reveal the essential mineral composition, individual sugars, organic acids, total phenolic contents, and antioxidant activities of 10 bee pollen samples from different botanical origins and different regions of Anatolia. Organic acid contents are responsible for the microbial and digestive properties of this valuable product. All data were evaluated by principal component analysis to discriminate pollen samples according to their origins.

References: [1] H.Kaygusuz, F.Tezcan, F.B.Erim, O.Yıldız, H.Şahin, Z.Can, S.Kolaylı, *LWT - Food Science and Technology* 68 (2016) 273-279