

**INVESTIGATION OF ANTIOXIDANT CAPACITIES OF NATURAL
VACCINIUM SPP. GROWN IN ERDEK AND KAPIDAG REGIONS**

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Blueberries (*Vaccinium* spp.) have an aromatic taste and valuable nutrients. The nutritional qualities and antioxidant capacities of blueberries are attributed to the presence of phenolic compounds. Although significant attention has been focused on the antioxidant capacity of phenolic compounds present in blueberry fruits, limited information is available on the phenolic antioxidant content in leaf tissues of blueberry cultivars. With this in mind, studies were conducted to determine the phenolic content of optimally harvested wild blueberry fruits (F) and leaves (L) from 6 different locations (located in the Erdek-E and Kapıdađ- K regions). Fruit and leaf samples were dried (DR) at room temperature ($20\pm 2^{\circ}\text{C}$) for 5 days, and then stored at -20°C , other samples were stored fresh (FR) in similar conditions. The antioxidant capacities of fresh and dried blueberry fruits and leaves were determined by CUPRAC (Cupric ion reducing antioxidant capacity), DPPH (2,2-diphenyl-1-pikrilhidrazil radical cleaning activity), ABTS (2,2'-azinobis(3-ethylbenzothiazoline 6-sulfonic acid), and FRAP (ferro (III) reduction antioxidant power) methods using spectrometer and were also expressed $\mu\text{mol g}^{-1}$ of TEAC (Trolox-equivalent antioxidant capacity). Results for the differences in antioxidant capacities of naturally grown blueberry fruits and leaves were evaluated on the basis of regions and altitudes. The highest antioxidant capacity values to have fresh and dried blueberry fruits and leaves obtained from Erdek and Kapıdađ regions were determined at the level of 11,43-23,26 (EFR), 14,84-51,21 (EDR) and 19,90-48,95 (KDR) in $\mu\text{mol g}^{-1}$ of TEAC (fruit, CUPRAC), and also, 77,50-102,05 (EDR) and 71,01-84,95 (KDR) in $\mu\text{mol g}^{-1}$ of TEAC (leave, CUPRAC), respectively.

Keywords: *Vaccinium* spp., antioxidant capacities, CUPRAC, DPPH, ABTS, FRAP

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