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Chemical Constituents in the Essential oil of the Endemic plant *Prangos platychlaena* from the Lakes Region of Turkey

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Abstract

The fruits of *Prangos platychlaena* (Endemic), growing wild in Lakes Region in Turkey, were collected at seed maturing stage from different localities to study the essential oil composition. Fruit samples of the species were collected from two different locations (Isparta, Sütçüler/Çandır and Burdur, Bucak/Kızılkaya) during the yellow ripening period, the essential oils of the fruits were determined in the hydrodistillation apparatus, and the essential oil components were determined in the GC-MS. The fruit essential oil rate in plants grown in the Çandır location was determined as $0.16 \pm 0.02\%$, and in the Kızılkaya location it was determined as $0.25 \pm 0.06\%$. It was determined that the fruits taken from the Çandır location consisted of 54 components, and the fruits taken from the Kızılkaya location consisted of 44 components, and a total of 73 different components identified in the fruits of the species. Major qualitative and quantitative variations of some compounds were determined with respect to localities of collection. The major components were germacrene-d (17.08%-20.24%), β -bisabolene (7.53%-17.83%), beta-copaene (0.92%-11.70%), caryophyllene oxide (%6.3-6.23%), β -farnesene (3.21%-5.66%), δ -cadinene (3.5%-3.87%) and ledane (3.35%-3.22%). It has been understood that the ecological factors of the region, especially the altitude, have a significant effect on the essential oil ratio and components.

Key Words: *Prangos platychlaena* (Endemic), Essential oil content and composition, Location

