

Volatile components of *Arbutus andrachne* L. in Isparta and Burdur provinces

Ayşe Gül Sarıkaya^{1,*}, Sevgin Özderin², Hüseyin Fakir³

¹ Suleyman Demirel University, Atabey Vocational School, Atabey- Isparta, Turkey

² Muğla Sıtkı Koçman University, Truffle Application and Research Center, Muğla, Turkey

³ Suleyman Demirel University, Faculty of Forestry, Forest Engineering Department, Isparta, Turkey

* Corresponding author: aysegulsarikaya@sdu.edu.tr

Abstract: The Ericaceae family has two evergreen *Arbutus* L. species with edible fruits. *Arbutus andrachne* L. and *A. unedo* L. are two members of the Ericaceae. *Arbutus andrachne* is the strawberry tree and it is native to the Mediterranean region and southwestern Asia. Its small trees are usually less than 4 m high and also the wood is used for several purposes including making carved spindles, stools and small furniture. *A. andrachne* trees are found growing on dry rocky slopes and hillsides or in pine forests, particularly in the Taurus Mountains of Turkey from just above sea level to 800 m. Infusion form of the leaves is being used as an urinary antiseptic, especially in the western and southern Anatolian traditional medicine. In this study that is conducted in vegetation period of 2015, leaf samples of *A. andrachne* were collected from Isparta (Aşağıgökdere and Çandır) and Burdur (Melli) provinces. Collected leaves were dried at room temperature (25°C). Samples were subjected to solid phase microextraction (SPME). 2 g of samples newly hand-picked was put into a 10 mL vial. After incubation for 30 min at 60°C, SPME fibre was pushed through the headspace of a sample vial to adsorbed the volatiles, and then inserted directly into the injection port of the GC-MS (Shimadzu 2010 Plus GC-MS with the capillary column, Restek Rxi®-5Sil MS 30 m x 0.25 mm, 0.25 µm) at a temperature of 250°C for desorption (5 min) of the adsorbed volatile compounds for analysis. Totally 37 components of *A. andrachne* were determined from Isparta (Aşağıgökdere and Çandır) and Burdur (Melli) provinces, of them (E)-2-Hexenal, (E)-3-Hexenol, and limonene were found main components. For Aşağıgökdere province (300 m), (E)-2-Hexenal (26.48%), (E)-3-Hexenol (15.52%) and Limonene (10.68%) were found as in order and also similarly same components were determined as 31.08%, 14.10% and 10.07% for Çandır province (350 m) and 32.11%, 15.12% and 10.33% for Melli province respectively. Despite the regional variability, the main components were found as the same.

Keywords: *Arbutus andrachne*, volatile components, (E)-2-Hexenal, (E)-3-Hexenol, Limonene, Isparta, Burdur