

The essential oils and aromatic water, known as Arak in traditional Iranian medicine, comes from the aerial part of *Teucrium persicum* Boiss, which is grown in Fars Province located in Iran. The samples were collected in summer and the oils and aromatic water were obtained through steam distillation. The chemical composition of the oils was analyzed using GC-MS. An analysis of the chemical profile of the isolated oils revealed the presence of more than 10 compounds, mainly oxygenated monoterpenes and sesquiterpene hydrocarbons. The principal components of essential oil were  $\alpha$ -cadinene (9.7%),  $\beta$ ,  $\epsilon$ -cadinadiene (9.2%) and  $\alpha$ -terpinyl acetate (7.9%). The major constituents in the Arak were determined to be linalool (10.2%),  $\alpha$ -cadinene (7.0%) and  $\gamma$ -terpineol (7.2%). Most of the compounds identified from different oils were similar, but their amounts differed. The oil revealed a higher content of total phenolics than the Arak ( $1.71 \pm 0.12$  mg GAE/g DW and  $1.37 \pm 0.11$  mg GAE/g DW, respectively). The antioxidant activity of the oils was calculated by using a ferric reducing antioxidant power assay (FRAP), DPPH radical scavenging activity, and a reducing power assay (RP). The FRAP value points to a considerably higher reducing power of essential oil ( $270 \pm 15.2 \mu\text{mol Fe}^{2+}/\text{g DW}$ ) compared to that of Arak ( $117 \pm 0.2 \mu\text{mol Fe}^{2+}/\text{g DW}$ ). Essential oil exhibited higher radical scavenging potential ( $\text{IC}_{50} = 0.29$  mg/mL) than Arak ( $\text{IC}_{50} = 2.19$  mg/mL). The reducing power of essential oil ( $0.17 \pm 0.03 \mu\text{g BHA}/\text{g DW}$ ) was higher than that of Arak ( $22.1 \pm 2.7 \mu\text{g BHA}/\text{g DW}$ ). The studied essential oils showed good antioxidant activities, which were higher than those of Arak.

**Keyword:** TEUCRIUM PERSICUM BOISS, ANTIOXIDANT PROPERTIES, ARRAQ, ESSENTIAL OILS, AROMATIC WATER