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A Comparative Study on Phenolic Acid Profiles in Leaves and Roots of Eleven Wild Populations of *Salvia leriifolia* Benth. from Iran

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Salvia leriifolia Benth. (Lamiaceae) is a perennial herbaceous plant, which has been used for different purposes in traditional as well as modern medicine. This plant grows as wild populations in Khorasan and Semnan provinces of Iran and some parts of Afghanistan. Unlike other species of *Salvia* genus, the chemical constituents of *S. leriifolia* are not well known however recently the existence of some phenolic acids such as rosmarinic acid, salvianolic acid B and coffeic acid have identified in this species. Phenolic acids and their derivatives are medicinally important plant metabolites. The present study was aimed to investigate the variations in phenolic acids content of eleven populations of *S. leriifolia*. Mature seeds were collected from wild grown plants in different areas of Khorasan (Razavi, South) and Semnan provinces. The seeds were planted in plastic pots containing coco peat. Seedlings at the four- leaf stage were transferred to 8 kg plastic pots filled with garden soil, coco peat perlite and sand (1:1:1 w/w). The plantlets with 28 leaves were harvested and dried at room temperature. The dried samples were extracted with methanol (80%) by cold maceration and then were analyzed for five individual phenolic acids (rosmarinic acid, salvianolic acid A, salvianolic acid B, lithospermic acid and coffeic acid) by HPLC method. The highest contents of rosmarinic acid (4.46 mg/g DW), salvianolic acid A (0.275 mg/g DW) and lithospermic acid (1.13 mg/g DW) were measured in the leaves of Sarogh population, however the leaves of Helali population were rich (3.27 mg/g DW) in salvianolic acid B. The maximum level (5.64 mg/g DW) of coffeic acid was detected in the roots of Torbat population. Our results showed that different populations had different potential for the production of phenolic acids. Sarogh, Helali and Torbat populations were highly recommended, as good sources of phenolic acids, for further evaluation of their potential to produce phenolic compounds.

Keywords: Coffeic acid, Population, Rosmarinic acid, Salvianolic acids, *Salvia leriifolia*

References

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