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Evaluation of 4 *Salvia* species compounds with thin layer chromatography (TLC) technique

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Background and Amis: Salvia, the largest genus of the Lamiaceae family, has been credited with a long list of medical uses, including: spasmolytic, antiseptic, astringent, antibacterial and antioxidant activities. These activities are due to the presence of phenols and terpenoids. Objective: To compare 3 Iranian native species compounds with S. officinalis .
Methods: The methanolic extract of the species was enriched with ethylacetate, after the prepration of the TLC plates with the size 3.5×4.5 cm and selection of the S. officinalis leaves extract as the standard, a spot of each extract was placed with a 0.5 cm distance from each other, on the TLC plates, and 8 solvent system was used to study the separation pattern of the compounds and the best solvent system has been selected.
Results: Among the different solvent systems which has been selected as mobile phase, the solvent system " chloroform-methanol (98:2)" was the best, and among the different species "S. mirzayanii" had the most separable compounds and "S, hydrangea" had the most similarity to "S. officinalis", so it may be use as an alternation for "S. officinalis".
Conclusions: TLC technique can be use as a simple, cheap and available method for recognition and screening of the compounds in different species of the same genus extracts. This method can be use as a rapid one for qualitative evaluation of a plant compounds, and primary screening of different species of a genus can be done by this method.

Keywords: *Salvia officinalis*; *S. mirzayanii*; *S. hydrangea*; *S. macrosiphon*