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**TOTAL PHENOL AND FLAVONOID CONTENT AND ANTIOXIDANT  
ACTIVITY OF METHANOLIC EXTRACT FROM  
*PEROVSKIA ABROTANOIDES* KAREL AT DIFFERENT STAGES OF PLANT  
GROWTH AND DEVELOPMENT**

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*Perovskia abrotanoides* Karel is an Iranian medicinal plant belonging to the Lamiaceae family. Different biological properties are mentioned for the plants of this genus including antibacterial, antioxidant, cytotoxic activities and apoptosis induction. Present study was carried out to evaluate the amount of phenolic compounds and antioxidant properties of methanolic extracts of *P. abrotanoides* Karel leaves at vegetative and flowering stages. Aerial parts of the plant, were collected from Kalat in northeast of Khorassan Razavi province of Iran. Phenolic compounds were extracted by sonication method. Total phenol and flavonoid contents of all extracts were obtained by aluminum chloride [1] and Folin-Ciocalteu [2] colorimetric methods, respectively. Antioxidant activities of extracts were measured by  $\beta$ -carotene bleaching (BCB) assay [3]. Phenolics content and antioxidant activity of leaves at vegetative stage, were significantly more than the other stage. The amount of total phenol and flavonoids of leaves at vegetative stage were estimated as  $4.347 \pm 0.067$  g gallic acid and  $1.063 \pm 0.043$  g quercetin per 100 g dry weight, respectively. At vegetative stage, leaves extract had the best performance in BCB assay ( $IC_{50} = 0.267 \pm 0.03$  mg/ml); compared with flowering stage ( $IC_{50} = 0.516 \pm 0.06$  mg/ml). A positive correlation was observed between the total phenol and flavonoid concentrations, and antioxidant activity of extracts in BCB assay ( $R^2=0.89$  &  $0.90$ , respectively). It may represent the role of phenolic and flavonoid compounds of the plant in its antioxidant potential.

#### References

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