

عنوان مقاله:

Assessment of phenolic profile and antioxidant power of five pistachio (*Pistacia vera*) cultivars collected from four geographical regions of Iran

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خلاصه مقاله:

Objective: In this study, the levels and antioxidant activities of some secondary metabolites isolated from five pistachio (*Pistacia vera*) cultivars collected from four different geographical regions of Iran, were studied. **Materials and Methods:** Total phenolic compounds levels were determined by Folin-Ciocalteu method. Total flavonoid content was determined as AlCl₃ complex and expressed as mg of quercetin equivalents (QE)/g dry extract and total proanthocyanidins content was expressed as mg of catechin equivalents (CA)/g dry extract. In order to evaluate the antioxidant activity of the compounds, DPPH and FRAP assays were used. **Results:** The highest level of total phenols (156.42 mg GA/g DE), total flavonoids (130.94 mg QE/g DE) and total proanthocyanidins (152.816 mg CA/g DE) were obtained in Akbari cultivar from Rafsanjan, followed by Badami-e-sefid and Ahmad aghaei. The lowest amount of total phenolic content (TPC), total flavonoid content (TFC) and total proanthocyanidin content (TPrAC) were found in Badami-e-sefid from Feizabad (128.140 mg GA/g DE, 93.176 mg QE/g DE and 118.870 mg CA/g DE, respectively). Also, a positive correlation ($r^2=0.9834$) was found between antioxidant activity and total phenolic compounds. **Conclusion:** Pistachio increased their phytochemical compounds to contrast with abiotic stress. Our data could be useful for introducing special characteristics to the plants, and can be considered when planning a new breeding program or choosing a specific cultivar for a particular use.

کلمات کلیدی:

Antioxidant activity, DPPH, Ferric reducing, *Pistacia vera*

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