

Abstract

Amaranthus herbaceous corolla and rarely small or upright shrubs, with simple or intermittent leaves, no earlobes, pseudo spike flowers and flowers are usually bisexual or monocular actinomorpha. There are ten different species of *Amaranthus* in different regions of Iran, two of which are called *Amaranthus viridis* L. and *Amaranthus graecizans subsp graecizans* L. weed in Sistan region. The amounts of phenolic compounds in different parts of the plant were determined by Folin covalent inoculation using a spectrophotometer in a 765 nm wavelength using a standard curve in mg/g of extract per gram. Total flavonoids by colorimetric method Aluminum chloride will be used to determine the antioxidant activity using the DPPH method. The anthocyanin content is read at 550 nm in length using a spectrophotometer. The results of this study on two types of *Amaranthus* show that methanolic extract of different parts of these two species during growth stages contain different antioxidant levels and concentrations, with the highest content of phenol, flavonoids, and anthocyanin, and the accumulation of free radicals is related to leaves. The highest amount of carbohydrates in the root, The highest chlorophyll a in the leaf production stage, the highest amount of chlorophyll b in the reproductive stage of leaf, the highest amount of carotenoids in the breeding stage and the most proline content of the seed.

Keywords: *Amaranthus*, Physiological Parameters, Antioxidant activity



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Title

**Study on some of physiological parameters and
antioxidant activity of two species of *Amaranthus*
(*Amaranthus viridis* L., *Amaranthus graecizans* L.)**

during the different stages of plant growth

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