

عنوان مقاله:

.Antioxidant activity of silver nanoparticles synthesized via green chemistry in amaranthus cruentus seed extract

محل انتشار:

سومین سمپوزیوم بین المللی سرطان نسترن (سال: 1396)

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خلاصه مقاله:

In modern societies, due to exposure to contaminated environments, radiation, unhealthy foods, free radicals, various diseases affect humans, including cancer. Antioxidants are substances that protect the human body against free radicals and prevent cancer cells. The aim of this study is to investigate the antioxidant effect of silver nanoparticles synthesized by the green method in *Amaranthus cruentus* seed extract. DPPH (2,2-diphenyl-1-picrylhydrazyl) chemical is used to measure the antioxidant activity of the substances. DPPH which is solved in 96% ethanol in order to form free radicals, which its maximum absorbance at 517 nm. If silver nanoparticles which synthesized in *Amaranthus cruentus* seed extract has antioxidant activity, resulted in reducing free radicals and decreasing amount of. The concentrations of nanoparticles were 125, 250, 500, 1000 $\mu\text{g/ml}$. ABTS test has also used. ABTS(2,2 - azino-bis(3-ethylbenzothiazoline-6-sulphonic acid)) solved in potassium persulfate in order to form free radicals. This solution has the peak absorbance at 734 nm. If silver nanoparticles has antioxidant properties absorbance was decreased. silver nanoparticles synthesized in *Amaranthus cruentus* seed extract with the help of green chemistry, was able to inhibit ABTS and DPPH free radicals, which the values of IC50 were 400 $\mu\text{g/ml}$ and 500 $\mu\text{g/ml}$, respectively. findings indicated that silver nanoparticles synthesized in *Amaranthus cruentus* seed extract, is able to inhibit free radicals in different concentrations, which increasing of the concentration result in more inhibitory effects. According to the results, it is recommended to use these kind of compounds in antioxidant nutritional supplements

کلمات کلیدی:

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