



The potential of *Calendula officinalis* in absorption of lead and cadmium with humic acid

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Abstract:

Green extraction of heavy metals from soil by roots and shoots are transported to the plant. This approach as the most effective and appropriate method of decontamination of inorganic contaminants (heavy metals) of soil is known. The use of plants to clean up heavy metal pollution of soil with benefits such as simplicity, low cost and environmentally friendly, is very interesting. Soil pollution with heavy metals such as lead and cadmium are a serious problem for ecosystems and human health, and dealing with it requires the use of pollution remediation methods. Lead and cadmium are known as elements that if in the soil, they have a considerable amount can affect the absorption of each plant. Removing heavy metals from contaminated land by plants, especially agricultural products is one of the most important means of access to the elements of the food chain and a drug. marigold(*Calendula officinalis*)herbal scrutiny star, grass and reliable stems branching and flowering tuber pile of yellow color. Factorial experiments CRD that the first factor in the 3 concentrations of cadmium and lead (0, 100 and 200 mg) and humic acid concentrations (0, 1 M) as the second factor in the greenhouse of university research 1393 was performed. Lead is related to the fact that this element is easily absorbed by plants and in concentrations that are not toxic to plants in agricultural products accumulate.

Keywords: lead, cadmium, cooling plant, marigold, Humic acid.