

Phytoremediation of by Helianthus plant

A.Neisi^{1,2}, M. Vosoughi², M.J. Mohammadi^{2*}, B. Mohammadi³, A Naeimabadi⁴

1 Environmental Technologies Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

2 Department of Environmental Health Engineering, School of Public Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

3 Department of Biology Payam Nour University Tehran units, Tehran, Iran

4 Department of Environmental Health, School of Public Health, North Khorasan University of Medical Sciences, Bojnourd, Iran

***Corresponding Author:** M.J. Mohammadi, Department of Environmental Health Engineering, School of Public Health, Jundishapur University of Medical Sciences, Ahvaz, Iran

Email: javad_sam2000@yahoo.com

Phone number: +989355439707

Abstract

Background and Aims: The environmental pollution induces rapid development of new technologies cases problems such as pollution of soil, water and air. Heavy metals contaminated can disturb Biodiversity soil. Phytoremediation is one of them new techniques in cleared of heavy metals in soil. A Phytoremediation method enables leaving a contaminated soil from the elements with accumulation of heavy metals in the shoots of plants. The purpose of this study was to evaluate the removing heavy metals in contaminated soil by phytoremediation.

Materials and Methods: This study performs on studies by reviewed _ descriptive, the effects of flooding and erosion, on environmental pollution and disasters; were collected based on available reviewed articles. Criteria for entry data was related to articles the topic and containing research keyword.

Results: The results showed significant differences are between cadmium concentrations in plant shoots and roots of Helianthus plants. Also significant differences observed between Transfer factors and bioaccumulation in another species, therefore extracted potential sunflower plant higher than sorghum. The results showed that the distribution of lead in different organs of sunflower plant can had complied concentrations absorb in lead levels of these elements in soil and with increasing concentrations of soluble lead in soil, were also increased lead concentration in plants.

Conclusion: lead and cadmium were absorbed in sunflower shoot plant higher than root.

Keywords: cadmium, lead, Phytoremediation, Helianthus.