

عنوان مقاله:

Effects of Ag and Pb metal accumulation on some biochemical parameters and anatomical characteristics of *Sesuvium portulacastrum* L. (Aizoaceae) plants

محل انتشار:

مجله علوم زیستی خاورمیانه، دوره 20، شماره 3 (سال: 1401)

تعداد صفحات اصل مقاله: 12

نویسندگان:

Widad M.T. Al-Asadi - Department of Ecology, College of Sciences, University of Basrah, Basrah, Iraq

Alla N. Al-Waheeb - Department of Biology, College of Science, University of Thi-Qar, Iraq

Sahar A.A. Malik Al-Saadi - Department of Biology, College of Science, University of Basrah, Iraq

Sadeq S. Kareem Al-Taie - Department of Biology, College of Science, University of Misan, Iraq

خلاصه مقاله:

The study reported the effect of contamination of *Sesuvium portulacastrum* L. after exposure to Ag and Pb for four weeks. The results showed that the total protein, chlorophyll, carotene, and biomass declined gradually by elevating the heavy metal concentrations. Elemental analyses of the leaves were performed using scanning electron microscopy with energy-dispersive X-ray spectroscopy (SEM-EDS). The main mineral of control treatment contained 11 elements including carbon (57.50%) followed by oxygen (22.76%) and trace iron and lead. The minerals in the leaves treated with 100 mg L<sup>-1</sup> Pb exhibited 12 elements with high levels of lead (52.03%). The leaves treated with 100 mg L<sup>-1</sup> Ag showed 11 elements with high levels of silver (43.02%) followed by carbon (34.95%) and oxygen (11.18%). Anatomical study indicated that the Ag and Pb can accumulate in internal tissues and causes several alterations such as shape of leaves, stems and roots, as well as thickness and number of cortical parenchymal cells. In addition, unrecognized the endodermis, and exodermis, the root thickness was 663.21  $\mu$ m in control group, while in Ag and Pb treatments were 498.32  $\mu$ m and 375.61  $\mu$ m respectively.

کلمات کلیدی:

*Sesuvium portulacastrum*, Chlorophyll, protein, Biomass, anatomy, Stem, Roots, SEM-EDS

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/2004956>

