

Abstract

Uranium is a radionuclide, which naturally occurs in Earth's soil in rather an insignificant amount. It is not very dangerous in such small concentration; however, this concentration is rising due to anthropogenic activity, therefore an estimation of its increase is at hand. It is necessary to research possibilities of not only effective, but also ecological extermination of this contamination. Phytoremediation could be an appropriate solution, but this method is still in its beginning stages when it comes to uranium contaminations. That's why we need to study influences of uranium on plants and find out to what extent are they suitable for phytoremediation of areas contaminated by uranium. Phytoremediation methods are based on the abilities of plants to receive and accumulate certain pollutants. The factors that influence the amount of uranium received by a plant can be divided into four groups: plant species, uranium's oxidation levels, pH of the medium or the substrate and ligand, which is attached to the uranium (Mitchell, 2013). Transportation of uranium to the aboveground part of the plant is also a factor here. Plants need to deal with the accepted uranium; aside from the radiological risks resulting from the characteristics of radioisotope, uranium is also a heavy metal. Chemical toxicity of uranium, which can cause oxidation stress among other symptoms, is much more significant for the plants this thesis is the discussion of plant's utilization for phytoremediation technics for areas contaminated by uranium.