

Phytoremediation As a Way to Clean Technogenically Polluted Areas of Kazakhstan

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Abstract

One of the most serious problems worldwide is heavy metal (HM) pollution. HMs can have a toxic effect on human health and thus cause serious diseases. To date, several methods have been used to clean environments contaminated by HMs, but most of them are expensive, and it is difficult to achieve the desired result. Phytoremediation is currently an effective and affordable processing solution used to clean and remove HMs from the environment. This review article discusses in detail the technology of phytoremediation and mechanisms of HM absorption. In addition, methods are described using genetic engineering of various plants to enhance the resistance and accumulation of HMs. Thus, phytoremediation technology can become an additional aid to traditional methods of purification.