

Metal ion uptake by water lettuce [*Pistia stratiotes*]: Possible method for effluent treatment

The increase in population, and new developments in industrial technology are constantly intensifying environmental pollution problems and creating new ones. Environmental scientists are forever seeking more economical methods of preserving the environment. Consequently research needs to be continuously conducted to find answers to pollution problems, in particular pollution due to heavy metals, as they directly affect human health.

Water lettuce [*Pistia stratiotes*], among many other aquatic plants, is able to remove many metal ions from polluted water showing its bioaccumulation ability. According to atomic absorption measurements, significant its bioaccumulation ability. According to atomic absorption measurements, significant reduction of the levels of metal ions such as Mg, Ca, Mn, Fe, Co, Cu, Zn and Pb, present in the medium in which water lettuce is grown, is observed. All metals show a removal ability of 35% within 48 h..

The removal ability is doubled within a period of six weeks for many metal ions. The ability to decrease electrical conductivity and Chemical Oxygen demand (COD) is an additional attractive feature of this plant. Further, such aquatic plants would be easily handled, and their use would be economical and environmentally friendly compared to available chemical methods for metal ion removal.