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(54) Title of the invention : NOVEL, ELECTRO-KINETIC PHYTO-REMEDIATION OF TOXIC HEAVY METALS FROM WATER USING HYDROPHYTIC PLANTS

<p>(51) International classification :B09C0001100000, A61K0031194000, B03C0003740000, C02F0003320000, B09C0001080000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No :NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)Abhijit Kantankar Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF CHEMISTRY TARA GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p> <p>2)S.Vijaya 3)K.Vani 4)M.Sunitha 5)Md Abdur Rafeeq 6)Mohd. Tousif Ahmed 7)K. Sreedhar Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Abhijit Kantankar Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF CHEMISTRY TARA GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p> <p>2)S.Vijaya Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF BOTANY TARA GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p> <p>3)K.Vani Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF CHEMISTRY TARA GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p> <p>4)M.Sunitha Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF CHEMISTRY GIRRAJ GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p> <p>5)Md Abdur Rafeeq Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF CHEMISTRY GIRRAJ GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p> <p>6)Mohd. Tousif Ahmed Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF CHEMISTRY GIRRAJ GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p> <p>7)K. Sreedhar Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF CHEMISTRY TARA GOVERNMENT COLLEGE, SANGAREDDY (A),TELANGANA, INDIA-502001. -----</p>
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(57) Abstract :

The present invention provides the process for the Electro-kinetic Phytoremediation (Ek-PR) has been proved as an effective method of Phytoremediation compared to normal phytoremediation method, the efficacy further increased when the experiment conducted in the presence of suitable Chelating agent. It is evident from the results of the research project is that the Citrate coupled Electro-kinetic Phytoremediation (Ek-PR) removes 82% of Hg and 83% of Pb from approximately 100 ppm of heavy metal solutions at 5.2 pH which is nearly 40% more increase of Hg under normal sort of Phytoremediation. Similarly Citrate coupled Ek-PR of Pb showed 6% of increased Phytoremediation compared normal conditions.

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