

Abstract

‘Studies on impact of metal rich effluent on soil fertility and plant growth and its remediation’

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The mobilization of heavy metals into the biosphere by human activity has become an important process in the geochemical cycling of these metals.

The second chapter presents the determination of heavy metal in and around industrial area of Faridabad. The chapter three describes the preparation characterization of metal trapping agents. Chapter four describes the Toxic effects of zinc sulphate on *trigonella foenum graecum*L. in the presence of metal trapping agents. The biochemical parameters chlorophyll, cartonoids, protein, proline were determined in the presence of $Znso_4$ with variable concentration and combination of metal trapping agent and $Znso_4$ with variable concentration. These biochemical data clearly show the toxic effect of zinc sulphate on plant growth. In the presence of metal trapping agents metal toxicity symptoms reduces, the metal trapping agent potassium bis pthalato borate was most effective to decrease the metal toxicity symptom. Chapter five describes the toxic effect of synthetic metal rich effluent on plant growth in the presence of metal trapping agent. The metal salt of Cr(11), Zn(11) and Cu(11) given to the plant with variable concentration.

Scheme-1

Preparation of potassium bis phthalato borate.



(Potassium bis phthalato borate)

Scheme-2

Preparation of potassium hydrotris (2-mercaptobenzathiazolyl) borate



Scheme-3

Preparation of potassium hydrotris (2-mercaptobenzathiazolyl)
Borate



Scheme-4

preparation of Potassium di hydro (Benzimidazolyl) (2-mercaptobenzimidazolyl) borate, (KL)

