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**REMOVING METAL IONS PRESENT IN ELECTROPLATING  
EFFLUENTS USING FELDSPAR, KAOLIN AND LATERITE**

A PROJECT REPORT PRESENTED BY

I.P. SAPINAS

To the Board of Study in Environmental Science of the  
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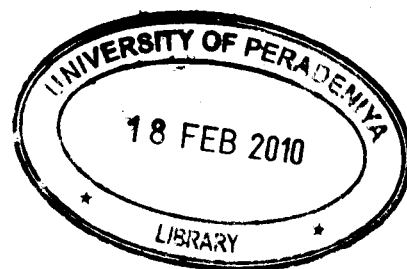
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# REMOVING METAL IONS PRESENT IN ELECTROPLATING EFFLUENTS USING FELDSPAR, KAOLIN AND LATERITE

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## **Abstract**

Industrial pollution has always been a problem due to detrimental effects associated with it. Heavy metals are notable source of pollution, which derives to a large extent by metal finishing processes. Electroplating effluents consists of metallic wastes which bring out hazardous effects to the environment and human being. Discharge of effluents is a considerable problem for developing countries like Sri Lanka due to high cost of treatment.

From this study, an attempt was made to assess the applicability of low cost substances as an alternative for expensive conventional treatments. This is an interesting property which has to be evaluated for their effective application in waste water treatment. Applicability of feldspar, kaolin and laterite was evaluated for removal of zinc, copper, cadmium, ferrous and chromium contained in electroplating effluents. Removal efficiencies for each metal were calculated as a percentage.

The method seems to be economically feasible as well as environmental friendly. Findings show that all three are promising sorbents for developing a low cost method for water treatment process. There for development of an appropriate technique based on this principle seems to be economically beneficial. Further improvements based on this, such as use of all three together as a mixture may also have a potential important as an effective adsorbent.