

**NASIRU AHMAD ALKANCHI**

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**WOOD ASH AIDED PHYTOREMEDIATION OF PYRITE SOILS BY *EUCALYPTUS*  
*GRANDIS* W. HILL ex maid SEEDLINGS  
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**ABSTRACT**

Generation of enormous volume of waste due to mining activities that subsequently pollute and degrade the environment is still a worldwide problem. The unfeasibility surrounding current traditional restoration technologies mainly due to high costs involved and ineffectiveness on large scale application renders the search for new inexpensive technologies paramount. In this vein, wood ash aided phytoremediation of pyrite soils using *Eucalyptus grandis* was investigated through pot experimentation. The study was guided by the following objectives; to determine physico-chemical characteristics of the pyrite soil, to assess the impact of wood ash potential on physico-chemical characteristics of the pyrite soil, to determine the impact of wood ash application on the establishment and growth performance of *Eucalyptus grandis* seedling on pyrite soil, to assess the bioaccumulation and translocation factor of Co and Cu. Results showed that the pyrite soils were extremely acidic and with poor nutritional status revealed by the low organic matter content, low total nitrogen content, low available phosphorous and cations (Mg, K and Ca). The pyrite soils were also characterized by high concentrations of both total and available copper and cobalt. Wood ash application has significantly increased the pH and the nutritional status of the pyrite soils and significantly lowered the bioavailable fractions of the Cu and Co. Wood ash application also significantly increased the growth performance of *Eucalyptus grandis* seedlings and these are suggestive of high potential of wood ash and *Eucalyptus grandis* for phytoremediation of pyrite soil.