



Physiochemical Properties of Plants in an Abandoned Lead-Zinc Mine Pit in Ishiagu, South Eastern Nigeria

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Abstract: The study assessed physiochemical status of the leaves of some plants in an abandoned lead zinc mining pit in Ishiagu, Nigeria. Twelve plants were randomly selected from the study site and a control site at Uturu for the study. Results of laboratory analysis showed that the study site samples had lower mean pH(5.6) higher mean ascorbic acid (1.31mg/g) and lower mean chlorophyll (9.94mg/g) contents than the control samples. This indicates that plants at the study site were exposed to heavy metal induced stress. However significant differences were not found between study site and control samples with respect to pH($p=0.2>0.05$), ascorbic acid and total chlorophyll contents($p=0.06>0.05$), relative water content ($p=0.82>0.05$), but significant difference was found between sites in stomata pore size ($p=0.03<0.05$). Among the various plants sampled, there were significant differences in the physiochemical properties analysed with the exception of relative water content. The observations for relative water content may be attributed to stomata occlusion by particulate deposits from mining activities at the study site.

Keywords: *Heavy metals, plants, physiochemical status, health risks.*

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