Phytoremediation Study of Oil Spill Site Using Common Nigerian Vegetables

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***Abstract*— Seven days old water leaf (*talinum triangular*) and pig weed (*amaranthus viridis*) were employed to clean up an oil spill simulated site. Samples of the crude oil, soil and plants were analysed for heavy metals before, during and after the experiments using X-ray Fluorescence techniques. Different parts of the plants such as roots, stems and leaves were harvested and analysed fortnightly till the end of the ten weeks experiment. The results obtained revealed mean concentration (mg/Kg) of heavy metals were of the range: Pb (0.01-1.42); As (0.02-2.02); Cd (0.01-3.42) Cr (0.03-6.14); Ni (3.21-6.42); Mn (4.12-8.46) and V (10.04- 1.22). High values of Bioaccumulation Factor and Translocation Factors were evaluated for different metals showed that the *amaranthus viridis* is an efficient hyperaccumulator. Phytoremediation technique offers the best panacea to remediate vast oil spill lands especially in Niger Delta of Nigeria.**

***Index Terms*— *Amaranthus viridis,* Oil Spill, Phytoremediation, *Talinum triangular,* X-ray Fluorescence,**

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