

## VARIABILITY IN SOME PHYSICAL AND CHEMICAL PROPERTIES OF SOIL ALONG A TOPOSEQUENCE IN ALVAN IKOKU FEDERAL COLLEGE OF EDUCATION, OWERRI, IMO STATE, NIGERIA

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### ABSTRACT

The research was embarked upon to assess the variability in some physico-chemical properties of soil along a toposequence in Alvan Ikoku Federal College of Education, Owerri, Imo State. Soil samples were collected from two different depths, 0-15 cm and 15-30 cm, at each topographic unit, namely, upper slope, mid slope and bottom slope. A total of 12 samples were used for the study. The, samples collected were air-dried, crushed and sieved in a 2 mm sieve preparatory to laboratory analysis. Means and coefficient of variation were used as the statistical tools. The results show that the physico-chemical properties of soil along the toposequence varied from low to high variation with the coefficient variation ranging from 1.05 % to 77.5 %. Sand fractions increases with depth, silt contents increases with decrease in slope and clay content increases down the slope and depth. The silt/clay ratio was low in all pedons. Soil pH was acidic in all the pedons. Percent organic carbon decreased with depth and increased from upper to bottom slopes. The results of this work have showed that there are changes in some physico-chemical properties of soil along a toposequence in A. I. F. C. E, Owerri.

**KEYWORDS:** Soil, Physical and Chemical Properties, Toposequence