

## PHOSPHATE SORPTION STUDIES IN SIX SRI LANKAN SOILS.

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Representative samples of Reddish Brown Earth (RBE), Red Yellow Latosol (RYL), Reddish Brown Latosolic (RBL), Red Yellow Podsollic (RYP), Immature Brown Loam (IBL) and Regosols were equilibrated with various amounts of  $\text{KH}_2\text{PO}_4$  in 0.1N KCl for 44 hours with intermittent shaking of 14 hours. After equilibration P concentration of the supernatant solution was determined by molybdate blue-ascorbic acid method. Exchangeable Ca, clay %, organic C, pH and CEC were measured. The mineralogy of these soils was obtained from the literature.

Adsorption maximum values of the soils were calculated as P sorption parameters. Relationships between soil characteristics and P sorption parameters were evaluated by regression analysis.

Soils are ranked according to their adsorption maxima as follows:  
IBL < Regosol < RBE < RYL < RBL < RYP. Values of CEC and the clay & of the soils showed a significant correlation with sorption parameters. Soil pH, organic C content and exchangeable Ca did not show a significant relationship with sorption parameters. It is seen that soils with high amounts of sesquioxides, and comparatively high amounts of Kaolinite show high P adsorption.