

DETECTION OF Cd IN FERRALITICS SOILS

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This paper exhibits the probable distribution of the Cd in four samples of ferralitics soils of the central portion of Jamaica (Manchester Parish). Those samples were submitted to analyses in Binocular Glass (BG), Optical Microscope (OM) and Scanning Electron Microscope with Energy Dispersive Spectrum (SEM/EDS).

In BG were determined the porosity degree, the consistency and the color of the grains of analyzed soils. In OM were found the next micromorphologic characteristic: 1 - ironstone plasma (I and II); 2 - limestone plasma (III); 3 - carbonate nodule; 4 - iron concretions; 5 - manganiferous concretions; 6 - aluminous-iron concretions and 7 - detrital minerals: (quartz, magnetite, ilmenite and carbonates). The micromorphologic features above mentioned were investigated in SEM/EDS, and presented the next compositions: 1 - ironstone plasma (I and II): Fe, Al, Si, Ti, P, K, Ca, Mn and Na; 2 - limestone plasma (III): Ca and Si; 3 - carbonate nodule: Ca and Si (eventually Cu); 4 - iron concretions: Fe, Ti, Al, Si, P, Ca, Ba and Cr; 5 - manganiferous concretion: Fe, Ca, Al, Mn and Si; 6 - aluminous iron concretion: Al, Fe, Si and Ti.

The analyses accomplished in SEM/EDS of the Laboratory of Eletronic Microscope of JGC-USP, it was not possible detect the Cd accurately. That fact can be explained by the type of applied chemical analysis (punctual), not including representative area of the analyzed sample. Another factor that contributed with the non detection of the Cd was the calibration of the "equipment of analysis" used, that was programmed to detect the second line of K and not the Cd, what should have been allowing that the apparel in subject, when it was analyzing Cd, it inserted K in the spectrum. About of the use of another equipment (SEM/EDS of NUPEGEL-IAG; JEOL JSM-T330A), it was possible to delineate in a clearer way the detection of the pick of the Cd, in the place of K.