TITLE:

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ABSTRACT

Located in the north of Paraná, Capivara lake is mainly formed by damming of Tibagi and Paranapenema rivers. Were analyzed water samples collected in nineteen locations distributed along the rivers Tibagi and Paranapanema. Soil samples were collected at five locations on the banks of the dam, in triplicate. Measures of pH, EH, electrical conductivity, water temperature and Secchi disc were performed at the collection site. Water samples were filtered through 0.45 µm membrane filter. The residue left on the membrane was used for the determination of the amount of particulate matter and total concentration of Ca, Mg, Cd, Cr, Cu, Fe, Mn, Pb, Ni and Zn in the particulate material. Samples of filtered water were used to determine the alkalinity, DOC, chlorophyll-a, chloride, nitrite, nitrate, sulphate and phosphate, and water spectra were obtained from 200 to 800 nm. This study determined the concentrations of Ca, Mg, Cd, Cr, Cu, Fe, Mn, Pb, Ni, Zn, S and P in filtered waters and soils. Most of the samples, 78.94%, had concentrations of DOC between 2.1 and 2.6 mg L-1. The values obtained from SUVA260 indicated the predominance of aromatic substances of pedogenic origin in 84.2% of samples, SUVA285 indicated that 94.73% of the samples are formed mainly of fulvic substances and refractory organic carbon, SUVA254 indicated the presence of humic material and aromatic molecules in 78.94% of the samples. The ratio E254/E436 confirmed the results showing the predominance of pedogenic organic matter. The E253/E203 ratio indicated the presence of phenolic substances and catecols in 94.73% of the samples. The analysis of physical chemical parameters, the metals concentrations, anions, S and P in the water separated the sites into two major groups. Group I, located around Primeiro de Maio city characterized by concentrations of Cr, Cu, Mn, Fe, Ni, P and chlorophyll-a. Group II was characterized by concentrations of Ca, Mg, pH, Secchi disk, electrical conductivity and alkalinity. The sites located near Primeiro de Maio city showed the highest concentrations of Ni, Zn, Cu and Cr indicating anthropogenic interference on water. Values of Kd (distribution coefficient) were calculated and in general the values were similar for each metal between the different sites sampled. The mean Kd calculated for each element followed the order: Cr > Mn > Fe > Cu > Zn > Ni > Pb > Ca > Mg > Cd. The objective this study were characterize organic matter dissolved in waters dam Capivara using

spectroscopy UV and statistica multivariada. Check the contribution physical and chemical water properties from tributaries in composition waters. Determine the availability of key metals by determining the distribution coefficient, or partition, of the metal.

Keywords: Freshwater, Organic matter, Metals, Distribution coefficient