

Bottom sediments from lakes of the Lagoa Santa region, Minas Gerais, Brazil.

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Geochemical and mineralogical analyses were done for undeformed bottom sediments from small lakes of the Lagoa Santa region, in Minas Gerais State, in order to evaluate the influence of human occupation in the area. The results are discussed considering the different pedological and lithological (carbonatic and pelitic) environments involved, as well as the different hydric regimes.

Four types of sediments were recognized: (i) "reddish" sediments similar to the surrounding latossolic soils. These sediments are typical of intermittent lakes and are also at the upper part of the profiles of the permanent ones. (ii) "greenish" sediments that occur in the karstic lakes with tributaries, corresponding to a less evolved soil; (iii) "dark gray" sediments; and (iv) carbon-rich "black" sediments called *gytja*, with abundant siliceous spicules. These last two ones are exclusive of the permanent lakes, and present signs of higher organic productivity, more acidic conditions and lesser potentials of oxidation. There is evidence of mobilization processes linked to the organic material. The low concentration of Al and Ti in the *gytja* suggests decrease in erosion rate.

Important vertical variations in the sampled cores were interpreted as possible indicators of human influence, which could be related, in some cases, to the industrial and domestic discharges in the lakes, to the construction and operation of a big airport and to a limestone quarry in the area.