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Mineralogical Characterization And Diatoms Colonizing Of Spring Water In The Patzcuaro Lake Basin. Rendon L.E.[1,*], Israde I. [2], Li Liu X. [1], Robles I. [1], Mexican Inst. of Water Technology, 8532 Cuauhnahuac Blvr. Jiutepec, Morelos, C.P. 62550, Metallurgy Research Inst. (UMSNH) Edifice U University City, Morelia, Michoacan C.P. 58060.

The springs around Patzcuaro Lake were sampled and studied by means of powder x-ray diffraction in order to understand the main ionic composition and diatoms in the spring water and determine if the ions are not a potential risk factor in the health of the inhabitants around the lake.

The chemistry composition of suspended minerals in the spring water has been a Ca, Mg and Na dominant composition.

Patzcuaro one of the central Mexico lakes, with relatively important economic and touristy activities is characterized by its peculiar folkloric activities and their impressive outlook surrounded by a large number of water springs.

The lake has been well studied since the 1990's, but water spring has not been characterized. Since 2003 a series of studies have been performed and focused in the characterization and management of these springs.

One of these studies regards the microorganisms colonizing the water of the main springs around Patzcuaro Lake. Diatoms have potential as indicators of environmental conditions and concentrations of dissolved salts clearly reflected in the composition of the spring diatom assemble. A total of 45 taxa were found in the three main springs. Freshwater taxa characterized the sites of low cation dominance such as Chapultepec spring and Uranden spring, meanwhile Huecorio spring shows more ion concentrated taxa.

The x-ray powder diffraction spectrograms of solid residues in the water spring showed mainly a siliceous calcite diagram.

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