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Removal of mercury, lead and cadmium in aqueous solution by natural and modified zeolites

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It was investigated the ions exchange of Hg (II), Pb (II) and Cd (II) from aqueous solution on clinoptilolita-K without modifying and modified by cation exchange with NaCl and NaOH solutions, To observe exchange capacity of the exchangeable Ca and K ions by Na ions, which are more accessible in the exchange of Hg (II), Pb (II) and Cd (II). For know the morphology of the zeolite was characterized with techniques of x-ray and x-ray fluorescence. The ion exchange isotherm experimental data for these ions were obtained in a batch experimental exchanger at different pH values and temperatures. Removal tests with different amounts of zeolite at a same concentration and different concentrations of heavy metals in aqueous solution at a same amount zeolite were performed. For know the removal percentage in the aqueous solutions was measured concentration before and after being in contact with the zeolite in a plasma atomic adsorption equipment.

Biography

Dulce Kristal Becerra Paniagua is a Chemical Engineer graduate in Technological Institute of Tuxtla Gutierrez in 2014. In this moment she is studying the master in Materials and Renewable Energy Systems in the University of Sciences and Arts of Chiapas. She is working in the development of an autonomous H₂O purifier for rural and disaster areas integrating one filter of zeolite for remove heavy metals in the water.

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