Abstract

The objective of our study is the development of clay of the western region of Algeria. The experimental study is the preparation and characterization of the modified clay techniques namely: (FTIR, DRX, FX) and physic-chemical analyzes (CEC, specific surface, swelling test., the acid index). Secondly, it is to achieve the elimination of copper ions trials (II). In our experiments, various parameters were studied: the amount of clay adsorbent, the stirring time, the initial concentration of the copper (II) ions and the pH of the solution. The kinetic study of the adsorption of copper on the modified clay showed that equilibrium is reached after 60 minutes. A high adsorption performance was recorded for the following optimum conditions at the temperature T = 25°C and the solid/liquid ratio = 2: initial concentration of ion Cu^{2+} = 40 mg / 1, the amount of adsorbent clay = 800 mg, pH = 6