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Adsorption of NR5 industrial dye by modified shell shrimp

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Our environment receives every day thousands of tons of foreign substances. The water pollution is such a vast phenomenon that a uniform response is impossible. At our level we became interested to rejects of the textile industry. Dyes present in industrial rejects are difficult to remove, because of their complex aromatic structure and their synthetic origin (non-biodegradable); whose elimination from effluents becomes difficult by biological methods. The adsorption offers an alternative to conventional methods. It is a method that presents two-fold dimension. The first is to reach treated water, purified and not expensive, and the second is the use of biomaterials, allowing for the recovery of waste. It is considered an effective and economic method. It has been used successfully for the effective removal of pollutants from waste water and a particular the removal of dyes. In this work, we opted for the shell of crustaceans known by their high content of chitin. The chitin is a biopolymer having affinity to various types of pollutants. The pollution taken as model is the NR5 blue dye. We used three different materials: MB shell of shrimp raw; MB10 and MB50: Modified shell of shrimp with 10% and 50% phosphoric acid respectively. The objective is to use them as sorbents for discoloration of the wastewater. The results showed that the best adsorption capacity is that of MB and MB10, which reached 120 mg/g.

Biography

H Benchekor is working at Algeria. Her international experience includes various programs, contributions and participation in different countries for diverse fields of study. Her research interests reflect in wide range of publications in various national and international journals.

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