elimination of organique Residues from an aqueous solution by Adsorption on Diatomite

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Abstract

Reducing the impact of wastewater on the environment is the main objective of our study. For this purpose, we used a natural material as an adsorbent for the purification of water charged with food coloring (Patent Blue V). The influence of different parameters on adsorption capacity such as contact time, concentration of the adsorbed molecule and the adsorbent dose. Have been studied. The results obtained showed that Patent Blue V adsorbed on diatomite at an initial concentration of 50 ppm is 48%. From these results we can say that the diatomite used as an adsorbent is effective for removing a food coloring. The natural abundance of this material and the low investment costs could offer a good alternative to other adsorbents which are more expensive such as activated charcoal, zeolite.

Key words: Adsorption, wastewater, food coloring, diatomite.

Recent Publications (minimum 5)

1. Kangkan Roy Kumar Vikrant, Kapil Mohan Verma (2018) Removal of Patent Blue (V) Dye Using Indian Bael Shell Biochar: Characterization, Application and Kinetic Studies
2. Noureddine Barka, S. Qourzal, Ali Assabbane, Y. Ait-Ichou, (2011) Photocatalytic degradation of patent blue V by supported TiO2: Kinetics, mineralization, and reaction pathway
3. Khashayar Badii,Faramarez Doulati ardijani,Masoud Aziz Sabri,Narges youssefi Liamee(2009) adsorption of acide blue 25 dye by diatomite in aqueous solutions
4. Junxiong Lin, M.-H. Fang, S.L Zhan, X.Q Qian (2007) The adsorption of dyes from aqueous solution using diatomite
5. DK Singh, Bhavana Srivastava (2000), Basic dyes removel from wastwater by adsorption on rice husk carbon



Biography

Labiod Kotbia has her expertise in water treatment and recycling, even in polluted or hard water. Using methods of precipitation by degassing dissolved CO2 by air bubbling and by stirring ,electrocoagulation ,electromigration and adsorption methods for improving water quality, environment protection and healthcare and valuable experience in artificial insemination in National Center for Artificial Insemination and Genetic Improvement (CNIAAG). She has built these methods after years of experience in research university laboratory and research center (URMA) in Algeria also collaboration with Tunisian institute Research Center for Natural Waters Treatment (LATEN) Tunis-Tunisia. Actually, she is PhD student in Laboratory of Water Treatment and Recovery of Industrial Waste (L.W.T.R.I.W), University of Badji mokhtar Annaba-Algeria and a researcher in Research advanced material Unit (U.R.M.A) in Annaba.

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