

8th World Congress and Expo on Recycling

June 25-26, 2018 | Berlin, Germany

Removal of medicinal residues from water by adsorption on diatomite

Labiod Kotbia¹, Hazem Meradi¹, Boukhamla Nadir¹, Slimani Ghania¹, Amara Korba Karima¹, Bouchoucha Sabri¹ and Hazourli Sabir²

¹Research Center in Industrial Technologies, Algeria

²University of Badji Mokhtar, Algeria

This study is particularly oriented towards the valorization of a local natural material, in the adsorption reduction of a medical residue (paracetamol) frequently found in wastewater. The optimization of the treatment required the study of the influence of several parameters namely: the mass of the adsorbent, the initial concentration of the drug, the pH etc. The results obtained showed that paracetamol adsorbs on diatomite at 14.71 mg/g for an initial concentration of 25 mg/l. The pH of the medium and the ionized form of the molecule is at the origin of this difference of adsorption. The results of the temperature effect give a priori exothermic adsorption.

Biography

Labiod Kotbia has her expertise in water treatment and recycling, even in polluted or hard water. She is involved in 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. She also has collaboration with Tunisian Institute Research Center for Natural Waters Treatment (LATEN) Tunis-Tunisia. She is a PhD student in Laboratory of Water Treatment and Recovery of Industrial Waste (LWTRIW), University of Badji Mokhtar Annaba-Algeria and a Researcher in Research Advanced Material Unit (URMA) in Annaba.

labiodkotbia@yahoo.fr