

Agricultural Waste Recovery For Industrial Effluent Treatment And Environmental Protection

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Abstract : In many countries, water pollution from industrial effluents is a real problem. It may have a negative impact on the environment. To minimize the adverse effects of these contaminants, various methods are used to improve effluent purification, including physico-chemical processes such as adsorption. The present study focuses on applying a naturally biodegradable adsorbent based on argan (southern Morocco) in a physico-chemical adsorption process to reduce the harmful effects of pollutants on the environment. Tests were carried out with the cationic dye methylene blue (MB) and revealed that removal is significantly higher within the first 15 minutes. The parameters studied in this study are adsorbent mass and concentration. The Freundlich model provides an excellent example of the adsorption phenomenon of MBs over argan powder. The results of this study show that argan kernels are a highly beneficial alternative for local communities, as they help to achieve a triple objective: pollution reduction, waste recovery and water recycling.

Keywords : environmental protection, activated carbon, water treatment, adsorption

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