

Treatment of the OUED SMAR town landfill leachate by an electrochemical reactor Desalination

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Description

The electrocoagulation process is an effective, fast and economic technique for the treatment of water and wastewater. In this paper, electrocoagulation (EC) has been used for the removal of COD, total nitrogen, color, turbidity and bacteria from the Oued Smar (north of Algeria) town landfill leachate, characterized by high chemical oxygen demand, high concentration of nitrogen and black color. Firstly, the effects of process variables such as inter-electrode distance, magnetic stirring speed, current density and electrode material on the treatment efficiency, sludge volume production, pH and temperature evolution during the EC process were studied. Secondly, energy consumption and operating costs were calculated with aluminium and iron electrodes under the same experimental conditions. The findings, in this study show that an increase in current density (125–500 A/m²) enhanced the speed of treatment ...

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