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Degradation of Disperse Red 167 Azo Dye by Bipolar Electrocoagulation

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ABSTRACT:

This study investigates the influence of variables on the removal efficiency of solution containing azo dye Disperse Red 167 by bipolar electrocoagulation (BEC). Current density, time of electrolysis, interelectrode distance, supporting electrolyte concentration, and total surface area were the variables that mostly influenced the azo dye removal. The efficiency of different electrode materials (Fe, Al) for azo dye removal is compared. The obtained results showed the effectiveness of the aluminum and iron electrodes for azo dye removal. The present study allows achieving a high level of decolorization (100%) with a short reaction time for both electrodes. The method was found to be highly efficient and relatively fast compared to conventional existing techniques.