

Photodegradation of Reactive Yellow 84 azo dye in the textile wastewater

Ilie SIMINICEANU, Mariana NEAMȚU and Matei MACOVEANU

"Gh.Asachi" University, Mangeron Blvd. 71A, 6600 Jassy, Romania

Abstract The photodegradation of the Reactive Yellow 84 azo-dye in water was investigated in a laboratory-scale batch photoreactor equipped with an immersed low-pressure mercury lamp as UV source. The kinetic results show that the UV/H₂O₂ process, with a H₂O₂ dose of 9.8 mmol/L, is 85 times faster than the UV process. After 60 minutes of irradiation, with 0.98 mmol/L H₂O₂, the decolorisation is almost complete whereas the mineralisation degree of the organic carbon is of 73.42%..

Keywords: Reactive Yellow 84, UV photodegradation, batch photoreactor.
