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Bruno Caram, Sara García-Ballesteros, Lucas Santos-Juanes, Antonio Arques, Fernando S. García-Einschlag

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Humic like substances for the treatment of scarcely soluble pollutants by mild photo-Fenton process

Bruno Caram[1], Sara García-Ballesteros[2], Lucas Santos-Juanes*[2], Antonio Arques[2], Fernando S. García-Einschlag[1],

1. Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA), CCT-La Plata-CONICET, Universidad Nacional de La Plata, Diag 113 y 64, La Plata, Argentina.

2. Grupo de Procesos de Oxidación Avanzada, Departamento de Ingeniería Textil y Papelera, Campus de Alcoy, Universitat Politècnica de València. E-03801, Alcoy, Spain.

ABSTRACT

Humic-like substances (HLS) extracted from urban wastes have been tested as auxiliaries for the photo-Fenton removal of thiabendazole (TBZ) under simulated sunlight. Experimental design methodology based on Doehlert matrices was employed to check the effects of hydrogen peroxide concentration, HLS amount as well as TBZ loading; this last parameter was studied in the range 25-100 mg/L, to include values below and above the limit of solubility at pH = 5. Very satisfactory results were reached when TBZ was above solubility if HLS and H_2O_2 amounts were high. This could be attributed to an interaction of HLS-TBZ that enhances the solubility of the