Turkish Journal of Chemistry

Turkish Journal

of

Chemistry

Keywords
Authors

chem@tubitak.gov.tr

Scientific Journals Home Page

Direct Dyes Derived from 4,4'-Diaminobenzanilide Synthesis, Characterization and Toxicity Evaluation of a Disazo Symmetric Direct Dye

Georgeta Maria SIMU[1], Sergiu Adrian CHICU[2], Nicole MORIN[3],
Walter SCHMIDT[1], Eugen ŞIŞU[4]

[1]Institute of Chemistry Timisoara, Romanian Academy, B-dul Mihai Viteazul 24, 300223 Timişoara-ROMANIA
e-mail: gsimu@yahoo.com

[2]Zoologisches Institut der Universität zu Köln, Weyertal 119, D--50923 Köln-GERMANY

[3]Ecole Normale Superieure, Rue Lohmond 24, Paris-FRANCE

[4]University of Medicine and Pharmacy Victor Babes Timisoara, Faculty of Pharmacy, P-şa. E. Murgu 2-4, 300034 Timişoara-ROMANIA

Abstract: The synthesis of a new symmetric disazo direct dye containing the non--carcinogenic 4,4'-diaminobenzanilide as the middle component and salicylic acid as the coupling component is presented. The synthesized dye is an analog of the benzidine based dye C. I. Direct Yellow 1 (C. I. 22,250) and was analyzed by thin layer chromatography (TLC), electronic spectra (VIS) and mass spectroscopy (FAB-MS). The coloristic and fastness properties of the synthesized dye were determined and compared with those of C. I. Direct Yellow 1. The toxicities of the dye and of its precursors were evaluated by biological tests, using the process of metamorphosis in the marine hydrozoon Hydractinia echinata. The concentrations (termed MRC_{50}) at which the synthesized dye and its precursors antagonize metamorphosis induction were determined.

Key Words: Direct dyes, 4,4'-diaminobenzanilide, fastness properties, Hydractinia echinata, toxicity, MRC_{50}

Turk. J. Chem., **28**, (2004), 579-586.
Full text: pdf
Other articles published in the same issue: Turk. J. Chem.,vol.28,iss.5.