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Sinteza i spektroskopska analiza 5-(2,4-disupstituisanih fenilazo)-3-cijano-6-hidroksi-4-metil-2-piridona

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U ovom radu sintetisane su tri azo piridonske boje, koje su potom okarakterisane FT-IR i NMR spektroskopijom. UV-Vis apsorpcioni spektri i tautomerija tri 5-(2,4-disupstituisanih fenilazo)-3-cijano-6-hidroksi-4-metil-2-piridona detaljno su analizirani u etru, *N*,*N*-dimetalformamidu, dimetil-sulfoksidu. Jedinjenja u okviru ove serije boja razlikuju se prema prirodi supstituenata u fenilnom jezgru (–Me, –OMe, $–NO_2$). U etru i dimetilsulfoksidu ispitivane boje postoje u hidrazonskom obliku. U rastvoru *N*,*N*-dimetilformamida, kod 5-(2,4-dinitrofenilazo)-3-cijano-6-hidroksi-4-metil-2-piridona, utvrđeno je da postoji ravnoteža između anjonskog i hidrazonskog oblika. Ravnoteža između ova dva oblika analizirana je u binarnim smešama etra i *N*,*N*-dimetilformamida različitih zapreminskih odnosa.

Synthesis and spectroscopic study of 5-(2,4-disubstituted phenylazo)-3-cyano-6-hydroxy-4-methyl-2-pyridones

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In this work, three azo pyridone dyes have been synthesized and analyzed by FT-IR and NMR spectroscopy. UV-Vis absorption spectra, as well as tautomerism of three 5-(2,4-disubstituted phenylazo)-3-cyano-6-hydroxy-4-methyl-2-piridones have been thoroughly analyzed in ether, dimethyl sulfoxide and *N*,*N*-dimethylformamide. The dye molecules have different substituents (-Me, -OMe, $-NO_2$) in the phenyl moiety. In ether and dimethyl sulfoxide, investigated dyes exist in hydrazone form. In *N*,*N*-dimethylformamide 5-(2,4-dinitro phenylazo)-3-cyano-6-hydroxy-4-methyl-2-piridone exhibits hydrazone-azo anion tautomerism. Equilibrium of two tautomeric forms has further been analyzed in binary mixtures of *N*,*N*-dimethylformamide and ether using different solvent ratios.