

Turkish Journal of Chemistry

Turkish Journal

of

Chemistry

Spectrophotometric Studies of the Behavior of P-Amino-N, N-Dimethyl Aniline with Ferric Nitrate in Methanol

A. H. Al-TAIAR, S. K. SHUBBER, A. MEGHERBI

Department of Chemistry, Faculty of Science, Laboratory of

Physical-Chemical Analysis,

P.O.B. 29031 U.S.T.O., Oran 31036, ALGERIA

e-mail: alialtaiar@hotmail.com

 [Keywords](#)
[Authors](#)



chem@tubitak.gov.tr

[Scientific Journals Home Page](#)

Abstract: The UV-visible absorption bands of the new complex were obtained using p-amino-N, N-dimethyl aniline as an electron donor with ferric nitrate as an electron acceptor in methanol at 25°C. The values of association constant K^{AD} , molar extinction coefficient ϵ^{AD} , and absorption band energy of charge transfer complex $h\nu_{CT}$ were calculated. The ionization potential of the donor I^D , was calculated from the complex band energy. The kinetics of the above association reaction were studied. This reaction was found to be a first order. The values of the rate constant of the forward reaction k_1 , the rate constant of the reverse reaction k_{-1} , and the half-life $t_{1/2}$ were calculated.

Key Words: UV-visible spectrophotometry, charge transfer complex, Benesi-Hildebrand, Scott, Foster-Hammick-Wardley, association constant, molar extinction coefficient, ferric nitrate, methanol.

Turk. J. Chem., **26**, (2002), 351-356.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Chem., vol.26, iss.3.](#)