DETERMINATION OF pKa VALUES OF SOME AZO DYES IN ACETONITRILE WITH PERCHLORIC ACID

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The effects of various groups and the solvents used upon the behaviour of the organic compounds in basic or acidic media have long been and still is of great interest among the scientists. The most important concepts used in the definition of acids and bases are acidity or basicity strengths. As knows these concepts are related their ionisation equilibrium constants.

In this study, 10^{-4} M acetonitrile solutions of fifteen azo dyes synthesized by coupling hydroxyl containing compounds such as phenol, 1-naphthol and 2- naphthol with five diazonium salts obtained by the diazotisation of aniline and aniline derivatives such as 3-chloro aniline, 2-methyl-5-chloroaniline and 4-nitro aniline were determined by the potentiometric titration in perchloric acid in acetic acid at room temperature. The turning points and the half neutralization potentials of these compounds were determined using the potentiometric titration curves obtained in order to calculate their pKa values.