



Hydrolytic Study of Mono-2, 3-dichloroaniline Phosphate in Buffer Medium

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ABSTRACT

The hydrolytic study of mono-2, 3-dichloroaniline phosphate has been carried out in buffer solution at 60°C in the pH range 0.00 to 7.45. The rate of reaction increases with increase in pH up to pH 4.10. The maximum value at pH 4.10 is due to hydrolysis via mononegative and neutral species. After pH 4.10 the rate of reaction decreases due to dissociation of mononegative species into dinegative species. The nature of dinegative species has been found to be inert. The experimental and theoretical rate values are in good agreement. Molecularity, bond fission have been supported by Arrhenius parameters. The monoester involves P-N bond fission, which is strengthened by comparative kinetic rate data.

Keywords: Hydrolysis; Buffer medium; Mono-2, 3-dichloroaniline phosphate; Mononegative species.
