

Kinetics and Mechanism of Oxidation of Some Amino Acids by Peroxodisulphate

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Abstract : In this study two amino acids were chosen (DL.alanine,DL.serine) to determine their effect on dissociation of $S_2O_8^{2-}$ ino. As the reaction was very slow, Ag^+ ino was used as a catalyst. The kinetics measurement showed that the reactions in both cases were found in the first order with respect to $S_2O_8^{2-}$, half order with respect to Ag^+ and zero order with respect to substrates. Mechanisms were proposed for these reactions according to the determined orders. The energy of activation (AE) was determined for each reaction, and was found to be 30.50 kJmol⁻¹ in case of DL. Serine and 24.40 kJmol⁻¹ in case of DL.alanine.

Keywords : mechanism, oxidation, amino acids, peroxodisulphate

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