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Kinetics and Mechanism of Oxidation of Some Amino Acids by Peroxodisulphate

Authors : Abdelmahmod Saad

Abstract : In this study two amino acids were chosen (DL.alanine,DL.serine) to determine their effect on dissociation of S2O8-2 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 S2O8-2, 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 by 30.50 k JmoI-1 in case of DL. Serine and 24.40 k JmoI-1 in case of DL.alanine.

Keywords : mechanism, oxidation, amino acids, peroxodisulphate
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