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Ru(III) catalysed oxidation of EDTA by N-bromophthaliamide in aqueous alkaline medium: A kinetic and mechanistic study

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The present study discusses the NBP oxidation in alkaline medium. Different workers have acknowledged unexpected products with unusual oxidants for EDTA oxidation. The role of the homogeneous catalyst ruthenium(III) has been investigated in alkaline media. It forms various intermediate complexes, oxidation states and free radicals. Herein, we have given an account of the Ru(III) catalyzed oxidation of EDTA by NBP to elucidate the possible mechanism and immediate species of oxidant, reductant and catalyst.

Keywords: NBP, EDTA, Oxidation, Kinetics, Alkaline medium