BEHAVIOR OF THE PORPHYRIN CATION RADICAL

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Decay rates of hematoporphyrin-Mn(IV) (II) to the Mn(III) complex (I) had been shown to increase with decrease of pH of the solution. In acidic media at pH $<\sim 6$, the reaction did not follow simple pseudo-first order kinetics. At pH 1.1, change of the absorption at λ_{max}^{440nm} was detected by a rapid-scan spectrophotometer. The nature of the intermediate was discussed on the basis of the results of chemical oxidation of (I) with Ce^{4+} at pH 0.8 and the oxidation-reduction potential of (II). The cation radical of (I) was most probable candidate for the short lived intermediate.

Hydrogen peroxide was detected in 7% yield as a product of the reaction of (II) to (I) at pH 7.4 by the potentiometric titration with Ce^{4+} Further, 30% of water soluble peroxide was detected by iodometry as a product of the reaction at pH 2.0.

REACTIONS OF 7-α-D-ARABINOFURANOSYLHYPOXANTHINE

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A new type of ketosugar nucleoside, 7-(5-trityl-2,3-dideoxy-2-oxo-α-D-pentofuranosyl)hypoxanyhine (1) and a new type of purinecylocnucleoside, 5'-O-trityl-3',6-anhydro-7-α-D-arabinofuranosylhypoxanthine (2) were synthesized from 5'-O-trityl-2',3'-di-O-mesyl-α-D-arabinofuranosylhypoxanthine. Mass fragmentation patern and mode of formation of 1 and 2 have been also discussed