

Spectrophotometric study on reaction of non-naturally haem proteins with thiols
in aqueous solutions.

Jehad A. Taies, Ammar K. Kuhait, , Ahmed S. Hmed, Jassim H. Hassan

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Abstract

Spectrophotometric titrations of dilute solution of tetra (p-sulphonaphthyl) porphinato Iron (II) [TNPS₄ Fe (II)] in the presence of a large excess of thiols at high (PH=12.8) were studied. Evidence for high spin five coordinate iron (II) complexes were found . Thermodynamic parameters and stability constants , refer to exothermic reaction with negative values of ΔH and ΔG . LogKF , Log KD and (n) number of bounded ligands were calculated , and found to be (n=1-1.3) , which were assigned to five and six coordinate to the iron (II) atom. These results are discussed in relation to the high spin iron (II) state in the catalytic cycle of cytochrome (p-450)

Keywords: Spectroscopic, haem proteins – thiols porphyrin