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MII-N-diisopropoxythiophosphorylthiobenzamide complexing processes in M2[Fe(CN)6]-gelati--immobilized matrices (M = Co, Ni, Cu)

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Abstract

Complexing processes in MII-N-diisopropoxythiophosphorylthiobenzamide binary systems (M = Co, Ni, Cu) in metal(II) hexacyanoferrate(II) gelatin-immobilized matrices upon contact with aqueous-alkaline (pH = 12.0 ± 0.1) solutions of organic compounds have been studied. It has been shown that, in CoII and CuII, the initial act of complexing involves destruction of the CoII and CuII hexacyanoferrates(II) by OH- ions, leading to formation of the corresponding hydroxides which react with the ligand indicated. In the both systems, successive addition of two ligand molecules per M(OH)2 fragment occurs and [MB(OH)(OH2)] and [MB2] coordination compounds are formed (B--a singly deprotonated ligand form). In the NiII---diisopropoxythiophosphorylthiobenzamide system, the formation of three complexes, (Ni2BOH)2[Fe(CN)6], [NiB(OH)(OH2)] and [NiB2] occurs.

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