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Template synthesis in the M(II)-thiocarbohydrazid--diacetyl triple system (M = Ni, Cu) in a metal(II)hexacyanoferrate(II) gelatin-immobilized matrix

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Abstract

Novel complexing processes in the Cu^{II}-thiocarbohydrazide- diacetyl triple system proceeding to a copper(II)hexacyanoferrate gelatin-immobilized matrix system in contact with aqueous-alkaline (pH 12) solutions containing thiocarbohydrazide and diacetyl, have been studied. It has been shown that mild template synthesis of copper(II) coordination compounds with (N,S,N,S)- and (N,N,N,N)- tetradentate ligands - 4,5-dimethyl-2,3,6,7- tetraazaoctadien-3,5-dithiohydrazi-e-1,8 and 3,10-dithio - 6,7,13,14- tetramethyl-1,2,4,5,8,9,11,12-octaazacyclotetradecatetrae-e-1,5,7,12 take place, respectively. At the same time, the complexing process in the system under examination, when it occurs in aqueous-ethanol solution between CuCl2 and the organic compounds indicated, leads to copper(II) coordination compounds with another (N,S,N,S)-tetradentate ligand - 3,9,10,16-tetramethyl-6,13 - dimercapto-2,17-dioxo-4,5,7,8,11,12,14-15-tetraazaoctadecahexaene - 3,6,8,10,12,15. In both cases, thiocarbohydrazide and diacetyl are ligand synthons in these complexing processes.

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