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Solvation and complex formation of nickel(II) with benzoic, p-chlorobenzoic, and p-methoxybenzoic hydrazides in aqueous-dioxane media

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Abstract

Solvation and complex formation of nickel(II) with benzoic, p-chlorobenzoic, and p-methoxybenzoic hydrazides in aqueous-dioxane media were studied. The mean coordination numbers of water and 1,4-dioxane in Ni(II) solvation complexes, the formation constants of mono- and biscomplexes of nickel(II) of the listed hydrazides at dioxane contents of 0-0.65 mole fraction, as well as the free energies of transfer of the ligands from water to aqueous-dioxane solvents were determined. An important role the basicity and solvation of the ligands play in the stability of Ni(II) complexes with benzoic hydrazides was demonstrated.

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