

**ANALYSIS OF ENVIRONMENTAL CHANGES AFFECTING THE VALENCE OF Ni IN COORDINATION COMPOUNDS WITH DIETHANOLAMINE IN NON-AQUEOUS SOLVENTS**

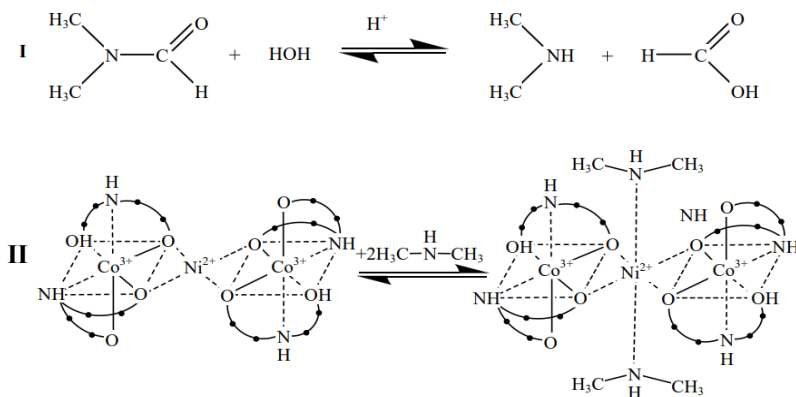
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The heteronuclear coordination compound (HCC) 2Co-Ni with diethanolamine [Ni(CoDetmHdetm)<sub>2</sub>](NO<sub>3</sub>)<sub>2</sub> was obtained and its stability was studied. The stability of coordination compounds of Co(III) with aminoethanol ligands depending on the pH of the medium was not previously studied in the literature. This parameter directly affects the structure of catalytic materials.

As a result of lowering the pH below 7 with the addition of hydrochloric acid, the solvent molecules begin to react with the products of partial destruction of the coordination compound. As a result, a new complex is formed, in which the coordination number of nickel(II) increases from 4 to 6. The question of the stability of the complexes in DMSO solution and its dependence on the acid-base properties of the solvent is still insufficiently studied in modern works.

The first stage (reaction I) is the partial hydrolysis of the solvent, and the second stage (reaction II) is the formation of a new coordination compound.



The obtained material can be used in the development of the latest technology for the creation of catalytic materials based on the products of thermal destruction of cobalt(III)-nickel(II) coordination compounds. For the formation of the purest complexes, it is necessary to avoid the pH range in an acidic medium, as by-products of hydrolysis and interaction with acid are formed.