Polarographic studies of copper(II), nickel(II) and cobalt(II) complexes with D-mannosamine.

Autorzy

Jadwiga Urbańska

Henryk Kozłowski

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Streszczenie

D.c. polarography was used to establish the coordination equilibria and the stability constants of the species formed at the lower pH range in solutions containing Cu(II), Ni(II) and Co(II) ions and *D*-mannosamine. Two complexes, ML and ML_2, were shown to be present for all three metal ions. The major binding site was shown to be the amino nitrogen donor. The involvement of the protonated hydroxyl oxygen of the aminosugar ligand leads to different stability constants for the complexes with particular aminosugar ligands (*e.g.*, with *D*-mannosamine, *D*-galactosamine and *D*-glucosamine). The polarographic technique was shown to be able to detect minor complexes not seen in potentiometric titrations. It effectively completes potentiometric and spectroscopic studies performed on the systems discussed in this work.

Słowa kluczowe

Aminosugars, D-mannosamine, first-row complexes, polarography stability constants

Adres publiczny

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