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Short Communication

Potentiometric and Conductometric Studies on Complexes of Folic Acid with some Metal Ions

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Sixteen metal ions viz; Li (I), Mg (II), Sr (II), Ca (II), Mn (II), Co (II), Ni (II), Cu (II), Zn (II), Cd (II), Ba (II), Pb (II), Al (III), Cr (III), Fe (III) and Th (IV) were selected to elucidate their interaction with folic acid using potentiometric method. The protonation and stability constants of formed complexes have been calculated using ionic strength, I = 0.2 M $NaNO_3$ in aqueous solutions at 25±0.1 ºC. Complexes of 1:1, 1:2 and/or 1:3 metal to ligand ratios were formed depending on the nature of the ligand or metal ions. The order of stability constants of the binary complexes was examined. The stiochiometry of the formed complexes was confirmed by conductometric method. Also, the ionic equilibria of ligand and its complexes with different metal ions in solution were investigated.

Keywords: Folic acid, metal complexes, potentiometry, conductometry

FULL TEXT