Differential pulse polarography of nickel(II) with imidazole and related compounds.
Jaber, A. M. Y.. Chem. Dep., Univ. Petrol. Miner., Dhahran, Saudi Arabia. Analytical Letters (1986), 19(21-22), 2039-61. CODEN: ANALBP ISSN: 0003-2719. Journal written in English. CAN 106:134643 AN 1987:134643 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Electrochem. redns. of Ni(II) complexes with imidazole, histamine, histidine, and pilocarpine have been studied using differential pulse polarog. in the presence of 1.0 mol/dm NaOAc as supporting electrolyte. The peak potential for the complexes appeared at more pos. potentials than for the Ni aquo ion. The pos. shift ceases and then reverses to the neg. direction for high ligand concns. Both histidine and pilocarpine have shown another wave which may be ascribed to the catalytic redn. of H ions in the soln. The peak height of the differential pulse prewave increases with the concn. of the ligands only when shift in potential is in the pos. direction with the Ni ion concn. in excess of the org. ligand. The linearity of variation of the peak height with the concn. for the above mentioned compds. has been investigated. A mixt. of histamine and histidine showed 2 sep. peaks, permitting possible simultaneous detn. when the compds. are in admixt.