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
of

Chemistry

Potentiometric and Spectroscopic Studies with Chromium(III) Complexes of Hydroxysalicylic Acid Derivatives in Aqueous Solution

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Abstract: The stoichiometries and stability constants of the chromium(III) complexes of hydroxysalicylic acid ligands (2,x-dihydroxy benzoic acids; 2,x-DHBA, x = 4-6)(H₃L) were determined in aqueous solution by potentiometry and spectroscopy at 25 °C and at an ionic strength of 0.1 mol L⁻¹ (KNO₃). The existence of Cr(HL)⁺ type complex was verified. The stability constants of coordination species that exist in Cr(III):2,x-DHBA systems were defined. In the acidic medium the major coordination species involve salicylate type coordination. The formation of monohydroxo complexes was observed at higher pH values.

Key Words: Potentiometry, equilibria, chromium, stability constants, hydroxo complex

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