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INFLUENCE OF SURFACE IONIZATION ON THE ADSORPTION OF AQUEOUS MERCURY CHLOROCOMPLEXES BY ACTIVATED CARBONS

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Abstract—The adsorption of aqueous mercury species from chloride solutions on a number of activated carbons has been studied. It was found that whereas the adsorption of neutral HgCl₂, or positive Hg²⁺ was very low, significant quantities of the tetrachloromercury(II) complex, HgCl₄²⁻, were adsorbed. Adsorption isotherms of this complex were measured at different pH values, and the results analysed by the Langmuir equation and by a simple surface ionization and specific adsorption model in order to obtain estimates of the adsorption stoichiometry and the mean free energy of adsorption. © 1997