

Synthesis and characterization of mercury(II) complexes of selones: X-ray structures, CP MAS and solution NMR studies. Isab, Anvarhusein A.; Wazeer, Mohammed I. M.; Fettouhi, Mohammed; Ahmad, Saeed; Ashraf, Waqar. Department of Chemistry, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. Polyhedron (2006), 25(13), 2629-2636. Publisher: Elsevier B.V.

Abstract

Hg(II) complexes of selones (L) [L₂HgCl₂], [L₃HgCl]Cl and [L₄Hg]Cl₂ were prepd. and characterized by elemental anal., IR and NMR (¹H, ¹³C, ¹⁵N, ⁷⁷Se, ¹⁹⁹Hg) spectroscopy. A decrease in the IR frequency of the C:Se mode upon complexation is indicative of Hg(II) binding via a selone group. Upfield shifts in C:Se resonance of selones in ¹³C and ⁷⁷Se NMR and downfield shifts in N-H resonances in ¹H and ¹⁵N NMR are consistent with the Se coordination to Hg(II). The complex of dichloro-bis(N-isopropyl-imidazolidine-2-selone-S)mercury(II), was characterized by x-ray crystal anal. The principal components of the ⁷⁷Se and ¹⁹⁹Hg shielding tensors were detd. from solid-state NMR data.