Synthesis and Characterization Of New Copper(II) and Palladium(II) Complexes with S,O-Tetradentate Ligand as Derivative of Thiosalicylic and Thiopropionic Acids

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Complexes of copper(II) and palladium(II) with different types of ligands (S, O and N donor ligands) have significant antiviral, antibacterial, antifungal and antitumor activity.[1-2] In this work we report synthesis and characterization of two new transition metal complexes (copper(II) and palladium(II)) with S,O-ligand as derivative of thiosalicylic and thiopropionic acid.

The transition metal complexes were obtained by direct reaction of S,O-tetradentate ligand as derivative of thiosalicylic and thiopropionic acid with starting metal salt (copper(II)-nitrate or potassium-tetrachloridopaladate(II)) in molar ratio 1:1 with addition aqueous solution of equimolar amount of lithium-hydroxide with satisfactory yields. The composition of obtained compounds was confirmed based on the results of elemental analysis. The structure and coordination of metal ions to donor atoms were predicted by spectroscopy methods (UV-Vis, IR and H^1 and C^{13} NMR) and magnetic measurements.

Keywords: Synthesis; Characterization; Copper(II) and Palladium(II)-complexes

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