P24. Di(μ-S)-bis{chlorin-[phenyl(pyridine-2-il)methanone-tiosemicarbazone (1-)]copper} as an Inhibitor of Breast Cancer T-47D Cells Proliferation

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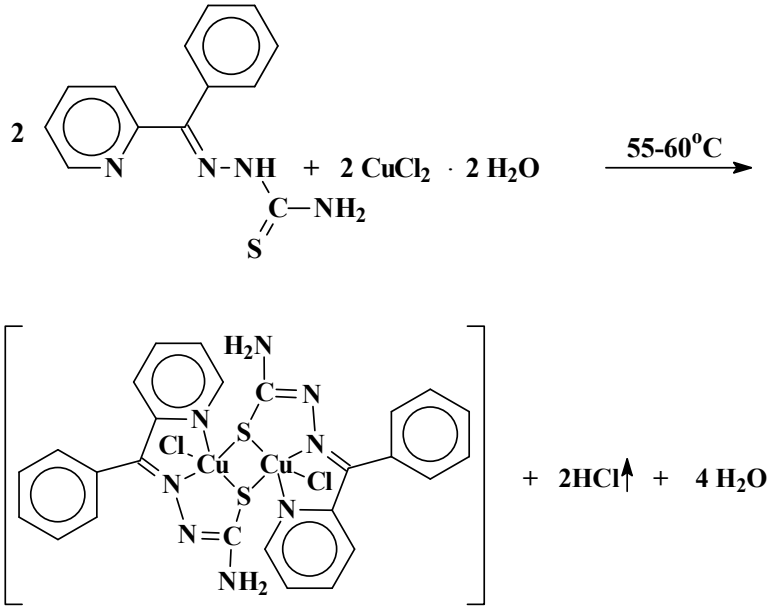
The objective of this paper consists in the determination of the optimum conditions for synthesis; determination of the composition structure; physicochemical, biological and antiproliferative properties of the copper (II) complex compound with 2-benzoylpyridine thiosemicarbazone.

During the interaction of the boiling ethanol solutions of $CuCL_2\ 2H_2O$ (55-60°C) with 2-benzoylpyridine thiosemicarbazone, taken in 1:1 molar ration, Di(μ-S)-bis{chlorin-[phenyl(pyridine-2-yl)methanone-thiosemicarbazone(1-)]copper} complex compound is obtained according to the following scheme:



The visual observation of the synthesized coordinative compound through a microscope has displayed that it has a phase homogeneity. Due to the small dimensions and absence of monocrystals of this complex, elemental analysis, IR spectroscopy, magnetochemistry and thermogravimetric analysis were used to determine its individual features and structure.

The obtained compound was tested on antiproliferative activity. The experimental data indicate that at 10^{-5} mol/L this compound inhibits 100% of growth and multiplication of breast cancer T-47D cell, but at 10^{-6} mol/L 38±3,5% of cell growth was inhibited.

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