

MS14-P12 | NICKEL(II) COMPLEXES WITH DITHIOCARBAZATE LIGAND: CRYSTAL STRUCTURES AND SPECTROSCOPIC ANALYSIS

Lima, Francielle (University of Brasilia, Brasilia, BRA); Gatto, Claudia (University of Brasilia, Brasilia, BRA)

Dithiocarbazates and their metal complexes have been the subject of many studies because they have a wide range of pharmaceutical applications and great chemical and structural versatility. These Schiff bases present varied structures coordination sites and allow the formation of complexes with several transition metals [1,2]. The present study describe the synthesis and crystal structures of the two new nickel(II) complexes with 2-hydroxyacetophenone-S-benzylidithiocarbazate (H_2L^1) ligand and additionally pyridine or triphenylphosphine to form respectively, $[NiL^1Py]$ (1) and $[NiL^1PPh_3]$ (2). The compounds were characterized also by elemental analysis and spectral measurements (IR, UV-Vis, 1H NMR and ^{13}C NMR) and the results are agreeing with similar works reported in the literature [3,4].

In both complexes the metal center shows planar square geometry connected to the ONS donor-atoms of the dithiocarbazate and additionally the phosphorus of the PPh_3 for the complex 1 and the nitrogen of the Py for the complex 2. The ligand adopts an E configuration and tautomeric and thiol form. Interestingly, π - π stacking interaction between the rings of triphenylphosphine are observed to the complex 1.

Acknowledgements: FAPDF, Capes and UnB.

[1] Lima, F. C. *et al.* (2018). *Inor. Chim. Acta.* 483, 464-472.

[2] Takjoo, R., Centore, R., Hayatolghheibi, S. S. (2018). *Inor. Chim. Acta.* 471, 587-594.

[3] Maia, P. I. S. *et al.* (2010). *J. Inor. Biochemistry.* 104, 1276-1282.

[4] Ali, M. A. *et al.* (1996). *Transition Met. Chem.* 21, 351-357.