

## SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL ACTIVITY OF PALLADIUM(II)-COMPLEXES WITH SOME *O,O'*-DIALKYL ESTERS OF 1,3-PROPYLENEDIAMINE-*N,N'*-DI-2-(3-METHYL)-BUTANOIC ACID

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Four new complexes of general formula [PdCl<sub>2</sub>L], (L = *O,O'*-dialkyl-(*S,S*)-1,3--propylenediamine-*N,N'*-di-2-(3-methyl)-butanoic acid dihydrochloride, alkyl = ethyl, n-propyl, n-butyl, n-pentyl) were synthesized by mixing 0.1 g (0.306 mmol) of K<sub>2</sub>[PdCl<sub>4</sub>] in 10 mL of water with equimolar amount of the corresponding ligand on a steam bath. The mixture was stirred for 2h and during that period water solution of LiOH (0.0073 g, 0.306 mmol) was added in small portions.<sup>1</sup> The complexes were a light yellow in color. The precipitates were filtered, washed with cold water and ethanol and air-dried.

The obtained complexes were characterized using elemental microanalysis, infrared (IR), <sup>1</sup>H and <sup>13</sup>C spectroscopy and mass spectrometry.

*In vitro* antimicrobial activity for these ligands and complexes is investigated. Testing was conducted against 15 microorganisms (five strains of pathogenic bacteria, three species of probiotic bacteria, two yeast species and five pathogenic fungi). Tested ligands, with a few exceptions, show very low antimicrobial activity. Palladium(II) complexes show selective and moderate activity. The difference in antimicrobial activity between ligands and corresponding palladium(II) complexes is noticed and it is always higher with palladium(II) complexes.

### References

1. Radić G. P., Glodović V. V., Radojević I. D., Stefanović O. D., Čomić LJ. R., Đinović V. M., Trifunović S. R. *Inorganica Chimica Acta* 2012, 391, 44.

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