

**MS30-P15** Crystal structure and synthesis of two complexes: bis[(2-amino benzamide)(benzoate)]copper(II) and bis[(2-amino benzamide)(benzoate)]cobalt(II)

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In this study, we describe the synthesis and X-ray structural determination of two complexes: bis[(2-amino benzamide)(benzoate)]copper(II) and bis[(2-amino benzamide)(benzoate)]cobalt(II), (**1** and **2**). Both Cu(II) and Co(II) ions in **1** and **2** have distorted octahedral geometry environments, and also forming four six-membered chelate rings. For the puckering-parameters values ( $Q$ ,  $\theta$ , and  $\varphi$ ), the A, B, C, and D rings for the complex molecules **1** and **2** are almost boat conformations. In both complexes, the molecules are linked by O-H...O, N-H...O, C-H...O, C-H...N interactions and van der Waals forces.

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**Keywords:** Metal Complex, Benzoic Acid, X-ray Crystallography.

**MS30-P16** Synthesis, structural characterization, and biological analyses of  $[C_{21}H_{23}Cu(II)N_2O_{12}]$  complex

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The title compound,  $[C_{21}H_{23}Cu(II)N_2O_{12}]$ , was synthesized from the reaction between 3,5-dihidroksibenzoic acid and 2-aminobenzamide in the presence of copper(II) sulfate, and characterized by means of X-ray single crystal diffraction method. The crystallographic analysis reveals that the geometry around the copper ion has a distorted pyramidal geometry by two O atoms, two N atoms and an O atom of  $H_2O$  molecule. The N-H...O strong intra- and O-H...O, N-H...O and C-H...O inter-molecular hydrogen bonding interactions mainly stabilize the crystal structure and form an infinite 3-dimensional network. Besides weak X-H... $\pi$  and  $\pi$ ... $\pi$  stacking interactions involving neighboring chains are also observed. Additionally, some effects of the metal complex on hydrolytic enzymes which are *Endo-1,4- $\beta$ -Ksilanaz* and *Endo-1,4- $\beta$ -Glukanaz*, and antimicrobial activity studies of the complex were carried out by using the various bacteria and fungi.

**Keywords:** Metal Complex, Benzoic Acid, X-ray Crystallography, Antimicrobial, Enzymatic Activity.