

Coordination Compounds of Cu(II), Ni(II) Based on Ethyl 4-benzoate Thiosemicarbazons Derivatives of Salicyl Aldehyde. Antimicrobial and Antifungal Properties

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The article publishes in vitro tests of the antibacterial and antifungal properties of new coordination compounds of Cu(II), Ni(II) based on ethyl 4-benzoate thiosemicarbazons derivatives of salicyl aldehyde. Two Gram-positive strains were taken as reference strains: *Staphylococcus aureus* ATCC 25923 and *Bacillus cereus* ATCC 11778; two Gram-negative strains: *E.coli* ATCC 25922 and *Acinetobacter baumannii* BAA-747; three fungal strains: *Candida albicans* ATCC 10231, *Candida krusei* ATCC 6258, *Cryptococcus neoformans* CECT 1043. The best results were recorded at {Ni(HL¹)Cl} complex, a selectivity is observed on *Cryptococcus neoformans*, with CMI = 0.016, CMF = 0.031 mg/mL and is twice as active as the control substance Nystatin. The purity and structural formula of synthesized compounds was confirmed by thin layer chromatography; IR spectroscopy; ¹H, ¹³C Nuclear Magnetic Resonance Spectroscopy, metal analysis and magnetochemical analysis.