

X-Ray Diffraction and Anti-Microbial Study of Synthesized Ru(II) and Rh(II) Complexes with Ciprofloxacin

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Abstract: New two metal complex from Ru(III) and Rh(III) with ciprofloxacin where synthesized in proportion of 1:2. Synthesized complexes where analyzed by elemental analysis, which help in predicting molecular formula of complexes. X-ray diffraction data help in analyzing atomic arrangement inside the coordination complexes. Infrared spectral data give idea about coordinating atom with Ru(III) and Rh(III). The synthesized metal complex was evaluated for in-vitro antibacterial and antifungal activity against the drug resistant pathogens such as *Pseudomonas aeruginosa*, *E. coli*, *Proteus vulgaris*, *Streptococcus pneumoniae*, *Vibrio cholerae*, *Salmonella typhi*, *Aspergillus niger*, and *Candida albicans*. The metal complex showed the significant antibacterial and antifungal activity comparison with commercial antibiotics.

Keywords: Ciprofloxacin, Metal, Antimicrobial, Antifungal, X-ray Diffraction.

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