

## An Attempt on Antimicrobial Studies of Lanthanide Schiff Base Complexes

**Authors :** Lekha Logu

**Abstract :** The coordination behavior of the newly synthesized Schiff base ligands, 4-bromo-2-((p-tolyl imino) methyl) phenol obtained by condensing para-toluidine with 5-bromo salicylaldehyde and N-(3,4-dichloro benzylidene)-4-methylbenzenamine obtained by condensing Para-toluidine with 3,4-dichloro benzaldehyde in ethanolic medium has been explored in this current study. The synthesized Schiff's base ligands were complexed with lanthanide nitrate salts yielding  $[LnL(NO_3)_2(H_2O)_2]NO_3$ , (Ln=Pr, Sm). Elemental analysis, conductance measurement, and spectral techniques like Nuclear Magnetic Resonance (NMR), Ultraviolet-visible (UV-Vis) and Fourier Transform Infrared (FTIR) have been used to characterize Schiff's base ligands and their lanthanide metal complexes. An attempt has been made on these complexes for their antimicrobial activity against the gram-positive and gram-negative bacterial species like Escherichia coli, Staphylococcus aureus, Bacillus subtilis, Klebsiella pneumonia and fungal species like Canadida and Aspergillus.

**Keywords :** lanthanide complexes, Schiff's base, antimicrobial assay, synthesis, characterization

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