

**SYNTHESIS, CHARACTERIZATION AND ANTIMICROBIAL
SCREENING OF SCHIFF BASE LIGAND AND ITS METAL
COMPLEX**

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ABSTRACT

SYNTHESIS, CHARACTERIZATION AND ANTIMICROBIAL SCREENING OF SCHIFF BASE LIGAND AND ITS METAL COMPLEX

Study had been done on the synthesis of Schiff base ligand. The condensation between amine and carbonyl group produced an azomethine group (C=N) or also known as Schiff base ligand. In this study, the condensation between salicydehyde and propane-1,3-diamine lead to the formation of 2,2'-((1*E*,1'*E*)-(propane-1,3-diylbis(azanylylidene))bis(methanylylidene))diphenol (HL). The ligand undergo further complexation with metal centre lead to the formation of metal complex. In this study, nickel(II) nitrate was used as the metal salt producing nickel complex (CL). The ligand and its complex were characterized by elemental analysis (CHNS), Infrared Radiation (IR) spectroscopy analysis, detections of melting point, molar conductivity and UV-Vis spectroscopy analysis. The result obtained shows that the measurement ligand coordinate to the metal centre through azomethine nitrogen (*N,N*) producing a bidentate ligand. The ligand and the metal complex were tested against gram positive and gram negative bacteria. The activity data shows that the metal complex are more potent antimicrobial compared to the parent Schiff base ligand of the metal complex.