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Abstract: 4-Methoxy-2-(5-H/methyl/chloro/nitro-1H-benzimidazol-2-yl)-phenol(HL_X; X=1-4) ligands and HL₁ complexes with Fe(NO₃)₃, Cu(NO₃)₂, AgNO₃, and Zn(NO₃)₂ were synthesized and characterized. The structures of the compounds were confirmed on the basis of elemental analysis, molar conductivity, magnetic moment, FT-IR, UV-visible, and ¹H- and ¹³C-NMR. Antibacterial activity of the free ligands, their hydrochloride salts, and the complexes was evaluated using the disk diffusion method in dimethyl sulfoxide (DMSO) as well as the minimum inhibitory concentration (MIC) dilution method, against 9 bacteria, and the results were compared with penicillin-G and oxytetracycline. It was observed that HL₁, [Ag(HL₁)](NO₃), and [Cu(L₁)₂](H₂O)₂ are effective on *S. epidermidis*, *S. aureus*, and *B. subtilis* (gram+) organisms compared with the other compounds. All compounds except HL₄ and [Zn(L₁)(H₂O)₂]₂NO₃ showed antibacterial activity on *S. aureus*.

Key Words: 4-Methoxy-benzimidazolylphenol, metal complexes, antibacterial activity.

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