**ABSTRACT**

A new series of transition metal complexes of the type ML where M = Cu(II), Co(III) and Fe(III) and L = 2-benzoyl-3-(nitrophenyl)quinoxaline have been characterized and the structural features were arrived from the elemental analysis, magnetic susceptibility, molar conductance, FT- IR, UV-Vis and NMR spectral data. From the spectral measurements and magnetic susceptibility values a square planar geometry was proposed for Cu(II) complex and an octahedral geometry for Co(III) and Fe(III) complexes. The qualitative and quantitative antimicrobial activity test results proved that all the prepared complexes are very active especially against *E. coli*, *S. aureus*, *C. albicans* and *A. niger*.