International Journal of ChemTech Research
CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.5,pp136-143,2017

Binuclear Manganese (II) complexes of a new Schiff-base as Ligand: Synthesis, Structural characterization, and antibacterial activity

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Abstract: A binucleating new amino schiff base ligand with a phenylene spacer afforded by the condensation of amino acids with*o*-pthalaldehyde has been served as an octadentateN_4O_4ligand in designing some binuclear complexes of manganese(II), binding manner of the ligand to the metal and the composition and geometry of the metal complexes were examined by elemental analysis, conductivity measurements, magnetic moments, IR,^{1}H,^{13}C NMR, Mass and electronic spectroscopies, and TGA,DTA measurements, there are two different coordination/chelation environments present around two metal centres of each binuclear complex .The composition of the complexes in the coordination sphere was found to be $[M_2(L)(H_2O)_4]xH_2O$ (where M=Mn(II). All the above metal complexes have shown moderate to good antibacterial activity against Gram-positive and Gram –negative bacteria.
Keywords: Binuclear complexes, Schiff base: synthesis, structural characterization, antibacterial activity.

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