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Spectral and antibacterial investigations of Er(III) Juglonates

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Abstract: Lawsone, Juglone, Phthiocol, Plumbagin and their Metal chelates of Er(III) are prepared. The chemical composition of Ligand and chelates are obtained by microanalysis and thermogravimetric analysis. The spectroscopic investigations are done with the help of IR spectroscopy and UV-visible spectroscopy. The morphological changes of chelates are studied from SEM photographs. The antibacterial activity of ligands and their metal chelates is examined against four bacterial strains; Bacillus subtilis, Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa. The spectral, thermal and antibacterial properties are studied with special reference to ring isomerism within the isomeric pairs of chelates.

Keywords: Er(III) chelates, Juglones, spectroscopic properties, antibacterial activity.

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