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Coordinated tetradentate Dithioacetylacetonate of trivalent transition metal ions – Synthesis and reactivity

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Abstract: Coordinated chelates of tetradentate dithioacetylacetonates of metal (III) have been synthesized in the modified simple method and their reactivity were reported with halogenating agents and α -naphthylisocyanate. The coordinated β -diketonates of transition metal (III) ions showed remarkable reactivity at γ -CH of the ligand moieties. The quasiaromatic character of these coordinated compounds is confirmed by conducting halogenation and α -naphthylisocyanation reaction. The activity of dithioacetylacetonates of metal (III) is compared with that of metal (II). The analytical data of the parent and reacted dithiochelate complexes were also studied. The products have been characterized by analytical, IR, NMR and electronic spectral studies. The activity among the three different metals in different series of transition metal is also compared and discussed with experimental evidences.

Keywords: dithioacetylacetonate, α -naphthylisocyanation, halogenations, physico-chemical studies.

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