

ALP Inhibitors: Vanadyl(IV) Complexes of Ferulic and Cinnamic Acid

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Two new vanadyl(IV) carboxylate complexes have been obtained: $\text{Na}_2[\text{VO}(\text{Fer})_2(\text{CH}_3\text{OH})_2]$ and $\text{Na}_2[\text{VO}(\text{Cin})_2(\text{CH}_3\text{O})_2]$ and characterized by elemental analysis and UV-vis, diffuse reflectance and IR and Raman spectroscopies (FerH_2 = ferulic acid, CinH = cinnamic acid). The thermal behavior was also investigated. The inhibitory effect on alkaline phosphatase activity was tested for the compounds and ferulic and cinnamic acids as well as for the vanadyl(IV) complex of quinic acid for comparison. The ferulic complex together with the free ligands exhibited the lowest inhibitory effect, while the VO/quinic and VO/cinnamic complexes showed an intermediate inhibition potential.

Key words: Vanadium, Cinnamic Complexes, Ferulic Complexes, Alkaline Phosphatase Inhibitors