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A Study on Metal Ligand Stability Constant with some Substituted Ketones and Chalcones

Ku.Shaila S.Wagh^{1*} and Ku.Aruna B.Lokhande²

1. Adarsh College, Hingoli-431513 M.S., **INDIA**
2. Shri Shivaji College, Chikhli Dist. Buldana-443201 M.S., **INDIA**
Email: sswagh16@rediffmail.com

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ABSTRACT

The interaction of Ce (III), Dy (III) and Nd (III) metal ions with 2-hydroxy-3-nitro-5-methyl acetophenone, 2-hydroxy-4-methyl-5-chloro acetophenone, 2'-hydroxy-3'-bromo-5'-methyl-4-methoxy chalcone, 2'-hydroxy-3'-iodo-5'-methyl-4-methoxy chalcone have been studied at 0.1 M ionic strength in 70% THF-Water mixture. It is observed that Ce (III), Dy (III) and Nd(III) form 1:1 and 1:2 complexes with substituted ketones and chalcones. The data obtained used to compare the P^k (proton ligand stability constant) and $\log K$ (metal ligand stability constant) and to study the effect of substituent on the complex. Here the metal ligand stability constant have been studied P^H metrically by Calvin Bjerrum Titration.

Keywords: Stability constant, THF-water mixture, Substituted ketones and chalcones.
