

✓
**COMPLEXES OF NATURALLY OCCURRING LIGANDS WITH BIOLOGICALLY
IMPORTANT METAL IONS V
DETERMINATION OF STABILITY CONSTANTS OF THE COMPLEXES OF
1-HYDROXYXANTHONE WITH SEVERAL METAL
IONS IN SOLUTION**

A. C. M. Dangalla and O. A. Illeperuma
(Dept. of Chemistry, University of Peradeniya)

The preparation of several stable complexes of 1-hydroxyxanthenes with biologically important metal ions have been reported earlier (2). Since xanthenes are commonly found in plants their solution studies involving the identification and stability constants of the corresponding metal complexes are important.

The stability constants for the different species involving several metal ions (Cu^{2+} , Ni^{2+} , Co^{2+} , Mg^{2+} , Mn^{2+} and Zn^{2+}) have been determined (1) by a pH potentiometric titration technique in dimethyl sulfoxide. Here mixtures of the metal and the ligand in the appropriate molar ratios and in the presence of supporting electrolyte 0.1M KCl in DM30 were titrated with 0.01M KOH and the resultant pH values were obtained using a pH meter. The stability constants follow the Irving-Williams order for divalent ions towards donor ligands and is as follows : Cu^{2+} , Ni^{2+} , Co^{2+} , Mn^{2+} and Zn^{2+} , Mg^{2+} .

References

1. Albert, A., *Biochemical Journal*, 47, 531 (1950).
2. Dangalla, A. C. M. and Illeperuma, O. A., *Proc. Sri Lanka Assoc. Adv. Sci.*, 37 (1), 54 (1981).