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STUDY OF METALLOELEMENT COMPLEXES BY CONDUCTIVITY METHOD

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ABSTRACT

The study of metalloelement complexes was carried out by conductivity method. The present work was based on Job's method of continous variation. The formation and the composition of metalloelement complexes is reported and discussed.

INTRODUCTION

The isolation and structural studies of stable complex ions may be carried out by some analytical methods. The study of the complexes has been done because of thier vital importance in analytical reactions, metallurigical operations and biological processes. Several physical and chemical methods [1-5] have been employed to investigate the behaviour of the complexes.

The physical methods are mostly based on Job's method of continous variation. The simplest application of the method involves the equilibrium of the type A + nB ------> ABn, where "A" represents a metal, "B" a coordinating group and ABn a complex. Solutions of A & B are prepared in which the molarities of the components are varied and mixture is prepared such that volume of both components together is kept constant. In this work conductivity method was used to determine the formation and the composition of methalloelement complexes in solution.

MATERIALS AND METHODS

All chemicals used were of analar grade. The systems studied are shown in table-I. The solutions were prepared by weighing M/50 or M/80 or M/100 gm of the salt or as requried. The solutions of salts A and B were made upto 250ml and 500ml respectively. 10ml was taken from solution A in 100ml of flask and to it added different volumes (5-100ml) of solutions B. The total volume of the mixture was made 100ml by adding conductivity