

## عنوان مقاله:

Complex Formation of Bis(salicylidene)ethylenediamine (Salen type ligand) with Cupper(II) Ions in Different Solvents: Spectrophotometric and Conductometric Study

## محل انتشار:

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## خلاصه مقاله:

The complexation reaction between salen (Bis(salicylidene)ethylenediamine) and Cu(II) cations in methanol (MeOH), 2-propanol (2-PrOH), acetonitrile (AN), tetrahydrofuran (THF), and chloroform (CHCl<sub>3</sub>) as nonaqueous solvents at 25<sup>o</sup> C has been investigated. The stoichiometry and formation constants of complexes have been determined spectrophotometrically and conductometrically by method of continuous variations and mole ration method. The stoichiometry of Cu(II)-salen complexes in all solvents were 1:1 (ML) type using the two methods. By method of continuous variation, chloroform > 2-propanol > methanol ~ acetonitrile ~ tetrahydrofuran. However, by mole ratio method, the order of stability was as follows: chloroform ~ tetrahydrofuran > 2-propanol > methanol ~ acetonitrile. The resulting average of pK<sub>f</sub> values in each solvent using the two spectrophotometric methods was as follows: 7.40, 6.89, 6.8, 6.22, and 6.18 for chloroform, 2-propanol, tetrahydrofuran, acetonitrile, and methanol, respectively. The Cu(II) cation formed a more stable complex with salen in chloroform. However, the less stable complex was in methanol.

## کلمات کلیدی:

copper, Conductometry, Salen, Schiff Base, Spectrophotometry

## لینک ثابت مقاله در پایگاه سیویلیکا:

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