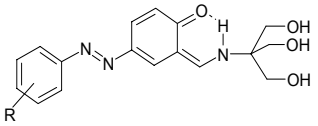
**Spectroscopic Investigation of some Azo-azomethine Compounds**

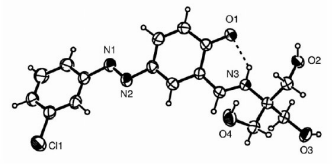
Orhan Büyükgüngör[a], Çiğdem Albayrak[b], Mustafa Odabaşoğlu[b], [a]*Ondokuz Mayıs Univ., Department of Physics, Samsun-Turkey.* [b]*Ondokuz Mayıs Univ., Department of Chemistry, Samsun-Turkey.* E-mail: orhanb@omu.edu.tr

The azo-azomethine compounds investigated with UV-VIS, IR, $^{1}$H-NMR, $^{13}$C-NMR and X-RAY spectroscopic methods were prepared by condensation of the corresponding azo dye derivatives of salicylaldehyde with tris(hydroxymethyl)aminomethane and then crystallized in suitable solvents.

The structure of Schiff bases derived from the salicylaldehyde generally exist in the *enol* form while others derived from the condensation of salicylaldehyde with tris(hydroxymethyl) aminomethane exists only in the *keto* form. Azo-azomethine compounds obtained as single crystals were found to prefer *keto* form as well.




R = H, 2-Cl, 3-Cl, 4-Et




The molecule with R=3-Cl [1]

IR spectrums show that azo-azomethine compounds in solid state prefer keto form whereas they are in *keto-enol* equilibrium, the *enol* form being dominant in solution according to UV-VIS analysis.

[1] Odabaşoğlu M., Albayrak Ç., Büyükgüngör O., Goesman H., *Acta Cryst*., 2003, **C59**, o234-o236.

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