

عنوان مقاله:

Thermodynamic Characterization of thionine dye with ct- DNA

محل انتشار:

سومین کنفرانس تخصصی ترمودینامیک (سال: 1390)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Hamid Dezhampanah - *Corresponding Author Address: Hamid Dezhampanah, Laboratory of physical Chemistry, Department of Chemistry, Faculty of science, University of Guilan, P. O. Box ۴۱۳۳۵-۱۹۱۴, rashat ۰۰۹۸, Iran*

Ali Ghanadzadeh guilani - *Corresponding Author Address: Hamid Dezhampanah, Laboratory of physical Chemistry, Department of Chemistry, Faculty of science, University of Guilan, P. O. Box ۴۱۳۳۵-۱۹۱۴, rashat ۰۰۹۸, Iran*

Mehrnaz Aghazadeh - *Corresponding Author Address: Hamid Dezhampanah, Laboratory of physical Chemistry, Department of Chemistry, Faculty of science, University of Guilan, P. O. Box ۴۱۳۳۵-۱۹۱۴, rashat ۰۰۹۸, Iran*

خلاصه مقاله:

The ct-DNA binding properties of thionine (Th) including binding constant and thermodynamic parameter have been systematically studied by spectrophotometric method. The binding constant and stoichiometry were determined by analysis of optical absorption spectra of the Th dye at various ct- DNA concentrations using SQUAD software. The binding of Th to ct-DNA is quite strong as indicated by remarkable hypochromicity, red shift and equilibrium binding constant (Kb). Van't Hoff plot of $1/T$ versus $\ln Kb$ suggests that the Th dye binds exothermically to ct-DNA which is characterized by large negative enthalpy and entropy changes. This suggests that Th dye possibly bind to ct-DNA via electrostatic by the intercalation mode.

کلمات کلیدی:

Thionine; Thermodynamic of binding; Optical absorption, SQUAD software

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