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Study of the spectral characteristics for the Styryl 9M laser dye

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Abstract: The molecular structure of the Styryl 9M laser dye had been described . Four different concentrations of this dye had been prepared using chloroform solvent .The absorption and fluorescence spectrums of the Styryl 9M laser dye solutions had been taken . The absorption spectral properties as (peak wavelength , peak absorbance and frequency difference at half absorbance maximum) and the fluorescence spectral properties as (peak fluorescence intensity , peak wavelength , full width at half maximum , line width and Stock's shift) had been measured for the prepared solutions . It had been concluded that the dye concentration increasing causes an increasing in the fluorescence photons emitted . The main conclusion is that the highest absorption leads to the fluorescence improvement.
Key words: Styryl 9M laser dye , fluorescence , absorption, properties.

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