SPECTRAL STUDY OF AMIKACIN - DNA INTERACTION

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Amikacin is an aminoglycoside antibiotic. Aminoglycoside antibiotics are bactericidal agents that are comprised of two or more amino sugars joined in glycosodic linkage to a hexoze nucleus. They contain a unique polyamine/ carbohydrate structure and have attracted considerable attention because of their specific interaction with nucleic acids. The bactericidal effects stem from their ability to block protein synthesis by binding to the A-site on ribosomal RNA. In this spectral study, the equilibrium binding constants were determined using visible absorption spectra. The results are rationalized in terms of several literature methods: Wolfe, Schwarz and Scatchard. The results indicate a tight binding between the drug and DNA.