

Charge Redistribution in Adenosylribosyl Transferase Caused by Substitution of a Single Amino Acid Residue

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Dielectric measurements in the frequency range 10^5 – 10^8 Hz were performed on wild-type (wt) adenosylribosyl transferase and a mutant enzyme. The analysis of the dielectric relaxation curve allowed the estimation of the hydrodynamic radius and of the electric dipole moment. The first parameter remained unchanged in wt and mutant protein. The dipole moment of the mutant, however, was significantly increased. Implications on the electrostatic interactions between enzyme and substrate are discussed.

Key words: Adenosylribosyl Transferase, Dielectric Spectroscopy, Protein Structure