

STRUCTURAL BEHAVIOR OF AQUEOUS
SOLUTIONS USING TIME DOMAIN
REFLECTOMETRY TECHNIQUE

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S u m m a r y

We have developed and established the TDR technique that provides information about the dielectric permittivity in the frequency range from 10 MHz to 30 GHz. The dielectric permittivity for the aqueous solutions can be explained by using a hydrogen-bond model by assuming the formation of hydrogen bonds between water-water and water-solute pairs. The orientational correlation between neighbouring molecules due to hydrogen bonds is determined in terms of the Kirkwood correlation factor. The number of hydrogen bonds in some aqueous solutions is computed.