

^{35}Cl NQR and ^1H NMR Studies of Molecular Motions in Guanidinium Salt of Chloroacetic Acid*

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Multinuclear NQR and NMR techniques have been applied in order to study the molecular dynamics in $[\text{C}(\text{NH}_2)_3](\text{ClH}_2\text{CCOO})$. The ^{35}Cl NQR frequency was measured over a wide range of temperature. The experimental results were described by using the theories of Bayer and Brown which take into account the torsional oscillations of the CClH_2 -group of the anion.

A study of the proton NMR second moment as well as relaxation times T_1 and $T_{1\rho}$ performed in a wide temperature range revealed an onset of the guanidinium cation reorientation around its two-fold symmetry axis. Activation parameters for this motion were determined.

Key words: NMR; NQR; Molecular Motion.

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