

^{35}Cl NQR Spectra of Arylsulphonamides, N-Chloro and N,N-Dichloro Arylsulphonamides

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The effect of substitution in the phenyl ring on the γ (^{35}Cl NQR) of N-Cl bonds of the N-chloro- and N,N-dichloro-arylsulphonamides has been studied and correlated. The correlation of ^{35}Cl NQR spectra of both the N-chloro and N,N-dichloro-arylsulphonamides is exceedingly good, although there was no systematic variation in the frequencies with substituents in the phenyl ring. The effect of substitution on the C- ^{35}Cl NQR of the phenyl ring has also been correlated. The deviation here is also not systematic due to the fact that the chemically equivalent chlorine atoms may exhibit different NQR frequencies due to crystal field effect. Finally, γ (C – ^{35}Cl NQR) of all the 4-chloro-1-substitutedbenzenes have been correlated through the line diagram.

Key words: ^{35}Cl NQR; N-chloro- and N,N-dichloro-arylsulphonamides.