

Carbon-13 and Nitrogen-15 NMR Spectra of Some Methanesulphonanilides

Prof. SHAIKH ASROF ALI

**Dept. of Chemistry , College of Science ,
King Fahd University of Petroleum & Minerals**

<http://www.kfupm.edu.s>

ABSTRACT

The ^{13}C and ^{15}N NMR spectra of some ortho-, meta- and para-substituted methanesulfonanilides were recorded. Correlations of the ^{13}C chem. shifts with the appropriate substituent chem. shifts for monosubstituted benzenes were excellent and showed enhancement of the substituent effects at C-1 (para to the substituent). The C-1 chem. shifts were also examd. by dual substituent parameter (DSP) and DSP-nonlinear resonance equations. The results indicate that the NHSO_2Me moiety is a weak electron donor. The ^{15}N chem. shifts of the para-substituted compds. were analyzed by the DSP equations and the results compared with those of related compds. Ortho-substituted compds. show a high sensitivity of ^{15}N chem. shifts towards steric compression. T1 And nuclear Overhauser enhancement data for the protonated carbons of methyl-substituted compds. are given.