

From Pavia, Fig. 3.5\_3.6

**TABLE 3.5**  
DEPENDENCE OF THE CHEMICAL SHIFT OF  $\text{CH}_3\text{X}$  ON THE ELEMENT X

Compound $\text{CH}_3\text{X}$	$\text{CH}_3\text{F}$	$\text{CH}_3\text{OH}$	$\text{CH}_3\text{Cl}$	$\text{CH}_3\text{Br}$	$\text{CH}_3\text{I}$	$\text{CH}_4$	$(\text{CH}_3)_4\text{Si}$
Element X	F	O	Cl	Br	I	H	Si
Electronegativity of X	4.0	3.5	3.1	2.8	2.5	2.1	1.8
Chemical shift $\delta$	4.26	3.40	3.05	2.68	2.16	0.23	0

**TABLE 3.6**  
SUBSTITUTION EFFECTS

$\text{CHCl}_3$	$\text{CH}_2\text{Cl}_2$	$\text{CH}_3\text{Cl}$	$-\text{CH}_2\text{Br}$	$-\text{CH}_2-\text{CH}_2\text{Br}$	$-\text{CH}_2-\text{CH}_2\text{CH}_2\text{Br}$
7.27	5.30	3.05	3.30	1.69	1.25